

# MOTOR AGE

## The South Seen Through Goggles

By H. G. Woodward  
PART II



*Fifteen miles south of Franklin, Ky., showing how clay washes out into deep gullies. Common in almost all parts of the South*

THE hotels everywhere in the far south-land, excepting in the few large cities, are nearly all poor, dirty, often a very few years out of repairs, and the service only to be described as "country nigger" style is the result of the negro characteristic and the ignorance of the proprietors, who do not know the business or how to get the work done.



The table usually is plentifully supplied, but preparation of the food abominable. Cold white bread seldom is seen, the hot biscuit and griddle cakes seldom are sufficiently cooked, but the hot corn bread often is good. Undercooking and grease are the prominent characteristics, with fried food a close second. The coffee and tea nearly always are bad; the milk frequently good, but if you do not specify sweet milk you will get buttermilk. In the country, where they should have

plenty, vegetables are rather scarce. Greens of mustard, turnips or collards, boiled with salt pork, is a favorite dish. Fried dry salt pork with plenty of gravy, which simply is the hot liquid lard, to put on the biscuits and potatoes, is regulation for breakfast. Eggs served to order are so commonly a part of the breakfast and supper that the negro simply asks, "How 'l yo' have yo' eggs?"

At the best, perhaps the only hotel in a country seat town of 1,500 people, the hot water in the tank on the rear of the kitchen range would be filled with chicken feathers, and on top of the range feathers burned into the grease. At a railroad eating house a big negro was filling plates with chicken. He picked up the pieces of meat with his fingers and then added the gravy with a spoon. It is customary for the bellboys in most hotels, and not uncommon for the guests, to scratch matches on the walls anywhere.

Supplies for the motorist cannot be obtained at every small town, as in the North. Gasoline will be found in most towns, but you may be charged 50 cents a gallon for it. Motor oil is never found except in the larger places. In the cities well-equipped garages and repair shops are always at hand.

Many of the country towns, as named on the maps, consist only of a store or maybe two or three stores and one to a half dozen houses in sight along the road. Every house within half a mile or more of the store is considered in the town, while the stranger may not know he is in a town. The country store ordinarily is a frame building, often with a lean-to addition, less often painted, usually with a high porch in front where customers can step from the teams or horses without getting in the mud, and with plenty of hitching places near, where teams and saddle animals usually are seen.

There usually is an open fireplace at the store, or maybe a wood stove at the rear, where the patrons sit on boxes and whittle, smoke, chew tobacco and talk crops and politics, the floor around the fire littered with shavings, tobacco and sweepings. Pieces of boxes, hoops and other trash are thrown in the road and the motorist had better give the litter plenty of room to avoid punctures from the nails which often are encountered most unexpectedly by the tourist.

At Louisville there was a garage arrangement new to me. There was a gutter the entire length of and close to each side

wall and a slight curb the full length of house in front of the cars after they are backed into storage position; hence each car always is on the wash rack.

If you have to hire a man to work on the car you are nearly certain to be delayed longer than is to be expected. Procrastination and excuses are prominent characteristics, the value of time is not appreciated. If work is promised next week and started in a month the workman is rather offended if called to task. Bills running overdue 1 to 6 months are common things and plenty of excuses are ready as to why they were not paid sooner. Any repairs will have to be watched closely, for the southerners are not good mechanics.

#### Not Good Mechanics

They lack almost entirely any education of the hands to do work, hence cannot instruct the negroes to take care of things themselves, and their houses, tools, wagons, harness and machinery are in bad repair except when new. I think their failure to do, or have things done, results

much more from ignorance of how to do than from the generally attributed cause of indolence. The utter helplessness of the average southern man to do anything with his hands, and his lack of knowledge of the common things in use every day, is really pitiful to the person who has the least mechanical skill or information.

In slavery days no white person, except the "po' white trash" was expected to do anything with his hands, so the best intellect of the country grew up with the least ability to make a living in case of need. When it was desirable or necessary to work, the men turned to literature, art, medicine or the law, all of the least value in development, and not to the engineering profession. The girls who are not so poor as to make work necessary are not taught to do anything of value in taking care of themselves or others, though much attention is paid to their social education. Such women usually are more ignorant of household duties than northern people can realize. As an extreme example, a married woman

who was suddenly left without a cook asked my wife if "you put in water when you boiled a chicken." They do not know how to sew or keep house, as a rule, but depend entirely upon the negro, or learn late in life, when they must.

Rather surprising stocks of goods, both in value and assortment, are carried in the country stores. Much of it would be unsalable in the north on account of its coarse quality. The large stores carry a little of many varieties of goods; children's toys to coffin trimmings; striped stick candy and drugs; clothing for both sexes; Stetson soft hats for the men and ready trimmed head gear and sun bonnets for the women; a large and rather good stock of shoes, paint clothes and cheap dress goods, stoves, kitchen furnishings and furniture, hardware and farming tools, eggs and butter, but seldom fresh meat or vegetables. The stock of dry salted side pork and corn meal is very large, as these are the greatest items of food. Cheap canned goods are handled liberally and among them cove oysters and 5-cent sardines are prominent.

The stock of snuff, chewing tobacco, smoking tobacco with cigarette papers, and cigars, is conspicuous for its size if not its quality. In the rear are found the barrels containing kerosene, molasses, machine oil and lard. The small stores carry mostly salt pork, corn meal, crackers, cove oysters, sardines, calomel and quinine, or at least you are sure to find these in the limited stock.

In the sections of the flat lands around the coast and in the broad valleys generally there is more wealth, and the people are more highly educated.

Doubtless because the land is more fertile and easier to work, the making of a living and surplus have been less difficult; having the surplus, the children have been educated and know how to live.

#### Conversation Is Puzzling

The people are slow of speech, have a pleasant drawl and use many localisms and some old English words which are not used in other parts of the country. These, with their different pronunciation, makes their conversation somewhat difficult for the stranger to understand. Two fairly educated and intelligent New Englanders, after hearing some educated southerners talk all evening, told me next day that they understood very little of the conversation.

The town men are exaggeratingly polite, especially in their attentions to women, but I see no reason to think that they really consider women as highly as do the northern men; certainly their politeness does not prevent them from staring a strange woman out of countenance; it is all simply a difference in education, custom and habit.

There is no hard feeling against northern people about the war, although foolish talking is sometimes done by women and men who were not in service. An inter-

Cliff in Gurley Creek Gap near Village Springs, Ala. Lower illustration shows rough road near top of Sand mountain





esting historical fact not commonly known is that Alabama voted against secession.

It is customary to speak to everyone you meet on the road, probably because travelers are scarce and are glad to see anyone. On account of the bad roads one sees many more people on horse or mule back than is seen in the north, where horses are ridden mostly for pleasure.

#### Country People Shy

The country people are shy at first, but after the ice is broken will talk and ask questions as long as one will listen and answer. Many of them are good observers and can tell interesting tales of things they have seen in woods and field. They are ignorant, hence do not interpret well what they observe, but the things stated as facts are seldom misrepresented. They are commonly expert in local knowledge of the country, but poor at giving one directions, as they refer to local names and things with which they are familiar and not to prominent landmarks, distances and angles. The tourist might not fully understand, "Well, you go down the main road about three-quarters and follow up Grapevine to Bill Jones' and cross the ridge and down the dry trench to the big road."

Should the person of whom you make inquiry be a man who has on rough, clay-covered shoes, a slouch hat with holes in it, a gingham shirt that is faded and shaped like a bag, home-made trousers of coarse jeans that have no shape, and are supported by suspenders that are merely strips of cotton cloth, don't think that he is a hobo to be treated with contempt. He probably is a land holder, a person of good descent and so a gentleman naturally, with feelings that are as easily hurt or offended as your own, and he sees no reason why he is not your equal; and he may be except in wealth and education, that is, in lack of opportunity.

The whites who live in the hills or mountain country were nearly all against secession, and few of them were slave holders; many of them fought for the union, but they had no use for the negro then or now, and localities where the negro is not allowed to settle are not uncommon. A native where we put up for the night told us "a nigger had better not let sundown catch him on Sand mountain." Their family was poor, ignorant and without ambition, but the blood of the English ancestors would not allow them to associate with the negro.

#### Some Women Chew Snuff

The country women passed on the road usually have short sticks protruding from their mouths, which may cause wonder to the stranger. They are the ever present snuff sticks. Most of the country, and some of the town women, use snuff in the same quantities that the men use tobacco in other forms. The country general store carrying as much snuff as chewing or smoking tobacco. The better class of girls often learn the habit from their negro

nurses and many of these continue it through life, the town women in secret.

The most common type of country home of medium grade is of two rooms with an open gallery between them, which serves a greater part of the year as dining and living room. Those with more means have a second story added and a "shed room" kitchen is very common. The chimneys are outside and large for open fireplaces, built mostly of stone, sometimes of brick, and in the poorer houses of sticks and mud. The floors in most of the older houses are of common wide boards, which shrink and leave wide cracks.

#### Way Houses Are Furnished

The old houses have few and small window openings, usually without glass and covered by rough board shutters, and many have no windows at all. Glass was expensive and hard to get and the houses without windows were safe from attack. Habit and poverty account for houses built in the same way now. Most of the old houses are of logs and for comfort

are little inferior, and for lasting qualities much superior to the board houses usually built now.

Homes of the wealthy planters were large and commodious; many of them have most of the latest interior improvements known in their time; they were usually frame with great wood columns in front. They now are rapidly going to ruin, the owners having moved to town and the once great house now is occupied by tenant farmers or negroes.

Houses of all types are raised from 1 to 4 feet from the ground on piers instead of continuous walls, probably to allow circulation of air in hot weather. The under space is the usual retreat of dogs and when of the proper height must be glorious to the hog with an itching back, judging from the way they sometimes scrape the floor timbers. Cellars are practically unknown. Porches are more numerous, large and more used than in the north, owing to the warmer climate.

The furnishings of the country house are meager, carpets are rare, though rugs

Country cotton gin 14 miles south of Huntsville, Ala. Lower illustration shows sawmill 14 miles from Huntsville, Tenn.





*Comparatively well kept country home on Sand mountain, which is located 16 miles from Huntsville*

made from rags are common. The chairs are most of them straight-backed and hand-made, with seats of split hickory. Closets are scarce, the clothes are hung on pegs or hooks and covered by a calico curtain. Pantries or shelves in the kitchen are few, the utensils and supplies are piled on the table or hung on pegs or nails.

Over the open fireplace is the old high-shelf mantel, its jambs worn smooth by chair backs tilted against it, its upper part black with smoke and the shelf covered with snuff boxes, patent medicine bottles and two or three cheap glass vases. On pegs over the shelf is the family shot gun or rifle.

"Step stoves," the front part of its top 4 to 6 inches lower than the back part, are still used to some extent, and the country stores still carry and sell skillets and pots for cooking in the open fireplaces. The skillet is 3 inches deep, has legs of equal length to support it over the coals, a handle a foot long and a cast cover with an inch high rim to hold the coals on top, and a big loop handle so that it can be removed with the poker.

I spent 3 weeks with a family which was above the average and looked up to in that section. The man had been to school or college in a large city, his father

had been a squire for years and he was then the squire or local magistrate. We had fresh meat two or three times, fresh vegetables, including potatoes, three or four times, and with these exceptions the fare consisted of hot biscuits, usually insufficiently cooked, and yellow hot corn bread—no cold bread of any kind—molasses, salt pork, fried and swimming in grease, and muddy coffee that probably was not all from coffee berries.

My host had rather a good mind, was well informed politically, had been a great hunter of deer and wild turkey and was a most interesting talker on these subjects; had followed his father in making illicit whiskey, but quit when made squire; was perfectly truthful and honest, generous and accommodating, solicitous for his family and one of the most pleasant men to associate with I have ever known.

I had the pleasure of sitting on the bench with the squire in one case, the bench in this instance being under a tree on the grassy bank of the creek. We decided to bind the culprit over to the grand jury and I loaned my shot gun to the constable, who rode horseback 16 miles, while the negro walked in front, to the calaboose.

In town every negro cook feeds her husband or man—their marriage relations

are not allowed to be onerous—from her employer's stock, and this is understood and accepted per force by the whites. As example of their servanthip: I have stayed in the house of people above the average, in the country, and having occasion to visit the kitchen I noted the reluctance of the housewife to have me do so. She said she was ashamed to have me see it, but she could not make the negro keep it clean. Under each stove leg was a brick, and sloping from the floor to its top was an accumulation of food scraps, grease and ashes, so hard that a broom could not move it; the windows were no longer transparent, but only translucent; the table, greasily clean toward the front, was, toward the wall, covered with a litter of pans and other utensils, and under these dust, grease and food scraps.

How much the negro chauffeur is costing the southern motor car owners over what competent drivers would cost, cannot be known, but the aggregate must be very large. Any negro will answer and often after a few days' instruction in driving is put in charge of a valuable car and, what is more astonishing, in his care are the lives of the owner's family. The owners themselves are ignorant of mechanics and have no realization of the energy represented by a couple of tons moving at 30 miles an hour, nor do they have an idea that they are the losers by employing an ignorant person at \$35 per month in places where intelligence and care may save \$100 per month easily, and probably will save \$50, and all the time have more comfort and safety.

#### The Negro Chauffeur

Probably the greatest reason why the southerner employs an ignorant driver is because he is used to the negro, always has had done for a coachman, and considers his car as a pleasure vehicle, not as a machine. But most of all, as I have been told by more than one, is the feeling that he does not know how to treat a white servant; the fear that he will treat him like a negro and that he must not treat him as an equal and that he cannot order him about as he does the colored man.

Before starting the trip from Buffalo through the south to Birmingham, Alabama, I bought a new car and special equipment. My decision as to car and equipment to use was based on the experience I had gained in a similar tour 2 years before. Perhaps the conclusions



*Overflow of great spring at Huntsville, Ala., which supplies town and cotton mills with power*



reached will be of interest to others contemplating a trip through the south in a modern motor car.

From my own experience and what I could gather from others, I concluded that a six-cylinder motor was more desirable than a four, because the delivery of power is continuous and therefore the power is better distributed for the same total cylinder capacity, under the same power. Then the car can be operated at slower speeds and is more flexible, requiring less changing of gears. Under same power and motor speed both the number of shocks and the individual shock are less, hence the destruction of bearings and all parts of the car is less and car should last longer or be cheaper to keep in repair.

#### Picking Out the Car

I decided that the Pierce-Arrow met my own views from a mechanical standpoint better than any other car. I wanted not less than 30 horsepower and did not care for more than 40 horsepower; seven-passenger body, without the extra seats, that is, plenty of room in tonneau for the dunnage which will accumulate on long trips in spite of other intentions; all the road clearance possible, so as to avoid injury to the car or passengers on the rough roads in the south, as there are some rough and many high center gravel roads in the middle west and north; large tires, especially in the rear, as my experience and the advice of the tire makers both say that tires of large section will give both cheaper mileage and less trouble.

#### Changing Driving Gear Ratio

The driving gear ratio should be the lowest obtainable for the car—as any gear furnished with cars of this class will admit speeds of 40 miles per hour, which is more than can be used with safety on but few roads, and more than is desirable for touring or comfort on dry roads—while the low gear has the great advantage of permitting lower speeds on direct drive and saves much labor to the operator in hilly country.

It is said that low gears increase the consumption of gasoline, but I would like to see comparative tests in sections of different character before believing the statement. I think that on an average the increase in consumption from increased piston displacement might be balanced by the motor's getting more work at nearer its maximum power output.

Color dark green, with minimum amount of striping or decoration, seems preferable because it is inconspicuous and will wear



On the way up Sand mountain. Chains are necessary because of loosely constructed road

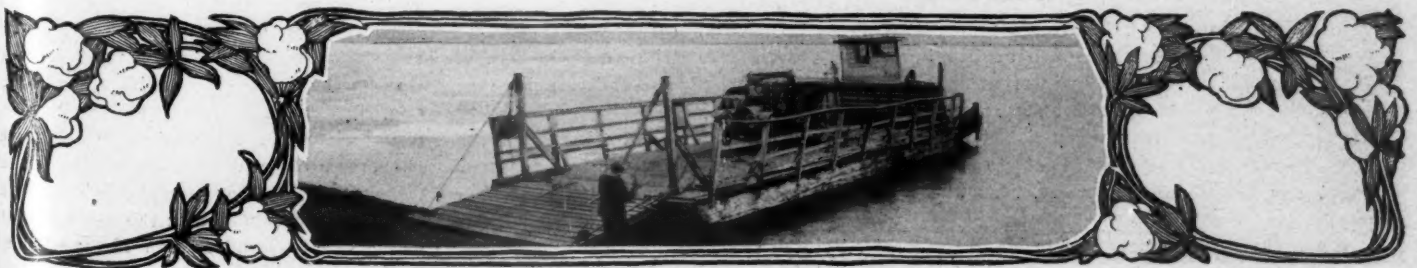
better than will bright colors. Quick detachable tires seem satisfactory and require little labor. Naval type headlights are best, as they are less bulky and plain, and easier to keep clean. Battery boxes to hold two batteries are needed, as they are often required on very long trips. A foot lever operating the throttle should be installed in addition to hand throttle, for it is convenient in quick street work and on hills.

In equipment not usually included in regular price of car—I wanted a cape cart top and cover for same when folded. An extra gasoline tank to hold about 11 gallons, arranged so that gasoline could not be used without knowing it, enables one to go long distances where gasoline is not obtainable and soon will save its cost in some sections by not requiring the purchase of fuel where prices are exorbitant. A gas tank in addition to generator should be arranged so that either could be used. The tank is more convenient and nearly as cheap when light is wanted for short periods only. The generator is needed for long periods, as it is cheaper and carbide can be obtained many places where filled tanks can not. Thus, the motorist generally is able to have plenty of light at night, which is needed in traveling through the country.

A power pump saves hard work, if a

satisfactory one is had. A speedometer reading to 50 miles per hour and an odometer reading to three places on the trip and to five places on the season record, so that total mileage will show after 9,999 miles, should be obtained. Covers for seats are cheaper and more satisfactory than upholstery. A folding glass front is good to keep bugs and rain out of the eyes, and that back draft may not be bad. I found the shield indeed a luxury, as well as a necessity, in my southern travels.

Other equipment needed includes tire rack to hold two tires and with a lock, as stealing is getting common; three extra tubes for each size case; two extra cases; covers for extra tires, that are as near dust and especially waterproof as obtainable; tire chains—absolutely necessary in mud; a trunk rack at rear; a good trunk of large size, and light; a dust and waterproof cover for trunk; a tire trunk, very desirable for women's hats and crushable apparel; an 8-day clock with second hand; four-in-one valve tool, which saves much vexation when threads are damaged on valve stems; an offset screwdriver for close places; last, but not least, a lock on the speed-change lever that will secure the lever in a neutral position and so prevent the use of car but allow the latter to be moved by hand for washing and in case of fire.



Ferryboat over the Tennessee river at Whitesburg, 11 miles south of Huntsville

# England Wins Prince Henry Trophy



## GERMAN TEAM

- No. 1—His Royal Highness Prince Henry of Prussia, Benz.  
 No. 3—Maurice Talbot, Opel.  
 No. 5—Herman Itendt, Opel.  
 No. 7—Marcus Kappel, Mercedes, driven by A. M. Kappel.  
 No. 9—Duke of Arenberg, Benz.  
 No. 11—Commander M. Ephraim, Opel, driven by Herbert Ephraim.  
 No. 15—Dr. James von Bleichroder, Mercedes.  
 No. 17—Baron von Friedental Falkenhausen, Adler.  
 No. 19—Landrat von Marx, Opel.  
 No. 21—Count George Orssich, Adler.  
 No. 23—Max von Wogan, Picard-Pictet.  
 No. 25—C. O. Fritsch, Mercedes.  
 No. 27—Dr. von Meister, Mercedes.  
 No. 29—Dr. O. Reichenheim, Picard-Pictet.  
 No. 35—Franz Wegeler, Adler.  
 No. 37—Willy Poege, Mercedes.  
 No. 39—Edward Eugler, Opel.  
 No. 41—Dr. K. Frankel, Mercedes.  
 No. 45—Commander General M. von Guilleaume, Mercedes.  
 No. 47—Edward Forchheimer, Benz.  
 No. 49—Dr. Arnold Hildesheimer, Austrian Daimler.  
 No. 51—Kurt von Boddien, Benz.  
 No. 43—A. von Recklinghausen, Fiat.  
 No. 55—Aug. Walter Pollich, Benz.  
 No. 57—Ritter F. von Klandy, Benz.  
 No. 59—Paul Koble, Mercedes.  
 No. 61—Captain Grieling, Benz.  
 No. 65—Alfred Ruperti, Mercedes.  
 No. 67—Albert Charlier, Mercedes.  
 No. 71—Kommerzienrat J. Schneider-Dorffel, Benz.  
 No. 73—Count Adolf von Arnim, Benz.  
 No. 75—Prince Karl of Isenburg, Mercedes.  
 No. 77—Geheimer Regierungsrat von Achenbach, Opel.  
 No. 79—Eugene Barbaro di San Gioglio, N. S. W.  
 No. 81—Prince Adolf of Schaumburg-Lippe, Adler, driven by Hugo Remy.  
 No. 83—Dr. Stoss, Jr., Horsch.  
 No. 85—J. P. H. de la Croix, Knight-Mercedes, running hors concours.



## PRINCE HENRY TROPHY

Match Between Royal Automobile Club of Great Britain and Imperial Automobile Club of Germany Comes to an End at London—Victory for the British Aggregation

long tour eliminated one English car and three Germans. Driving accidents put out at least three cars. Ritter von Klandy experienced a bad skid, seriously damaging both front wheels and axle of his Benz. G. F. Sharp, driving a Deasy, collided with a nonecontestant, damaging both radiator and gasoline tank. Repairs were completed within the time limit, however, and the car completed the run. One of the most serious breakdowns occurred at Sutton bank, which many cars failed to climb without assistance. The grade is 1 in 4. Marcus Kappel had to pull up because another car was in difficulty and in doing so broke the differential on his Mercedes in restarting. The car had to be towed away and sent to Germany. Outside K's-wick another German car stopped with a seized clutch shaft. Captain Kennedy was stranded for a night with a broken camshaft on his Delaunay, while another



## BRITISH TEAM

- No. 2—His Royal Highness, the Duke of Connaught, Daimler, driven by Edward Manville.  
 No. 4—Albert Levy, Berliet.  
 No. 6—Jairus E. Withers, Daimler.  
 No. 8—Claude B. Palmer, Rolls-Royce.  
 No. 10—Captain F. C. Loder-Symonds, Cadillac.  
 No. 12—F. C. Bowring, Daimler.  
 No. 14—Arthur Neill, Rolls-Royce.  
 No. 18—Phillip E. Noble, Armstrong-Whitworth.  
 No. 20—H. V. Rudston Read, F. N. Daimler.  
 No. 26—Sir R. Waldie Griffith, Bt., Deasy, driven by Michael Orde.  
 No. 28—Major H. Stuart Murray, Gobron-Brille.  
 No. 30—Austin Edwards, Standard.  
 No. 32—H. S. Thompson, Mercedes.  
 No. 34—Marquis de Mouzilly St. Mars, Daimler.  
 No. 38—Sir Robert Buchanan Jardine, Bt., Deasy, driven by T. B. Boynton.  
 No. 40—Oliver H. Valpy, Deasy.  
 No. 42—H. H. Melville, Mercedes.  
 No. 44—Captain T. W. B. Kennedy, R. N., Delaunay-Belleville.  
 No. 46—Arthur Douglas Ramsay, Talbot.  
 No. 48—Edward Rosenberg, Rolls-Royce, driven by James Yates.  
 No. 50—Lionel de Rothschild, M. P., Deasy.  
 No. 52—Sir Arthur Conan Doyle, Lorraine Dietrich.  
 No. 54—E. Moreau, Lanchester.  
 No. 56—E. J. Brook, Deasy, driven by R. J. Mccredy.  
 No. 58—Major the Hon. E. de Frey Beaumont, Deasy, driven by A. E. Berriman.  
 No. 60—S. G. Shead, Rolls-Royce.  
 No. 62—C. J. Hasslacher, Deasy, driven by George Sharp.

British car was put out by the breaking of a chain driving the magneto. Generally speaking, however, mechanical breakdowns were few and insignificant.

There were other prizes in addition to the trophy hung up for the team competition by the prince. His Majesty the King's cup commemorative prize went to the German club, while His Imperial Majesty the Emperor's cup was awarded to the British club. Her Majesty the Queen's cup for the best appointed car on the German team was given to Landrat von Marx with an Opel, while the corresponding trophy given by the German empress to the best ap-

LONDON, July 24—Special cablegram—The Royal Automobile Club of Great Britain is the winner of the international team match with the Imperial Automobile Club of Germany, which was finished here last Wednesday. Announcement to this effect was made Thursday night, when the prizes were awarded.

When the match started from Hamburg on July 4 there were twenty-eight British cars opposed to thirty-seven Germans. The



pointed English car was presented to N. C. Neill with a Rolls-Royce. The Princess Henry of Prussia gave a cup for the next best appointed car on either team, which was given to F. C. Bowring, who drove a Daimler.

The tour proper finished on Wednesday, but the final event took place on Thursday, when the two teams went to Brooklands, and after the cars had been paraded before a fashionable gathering the tourists witnessed a fine day of racing.

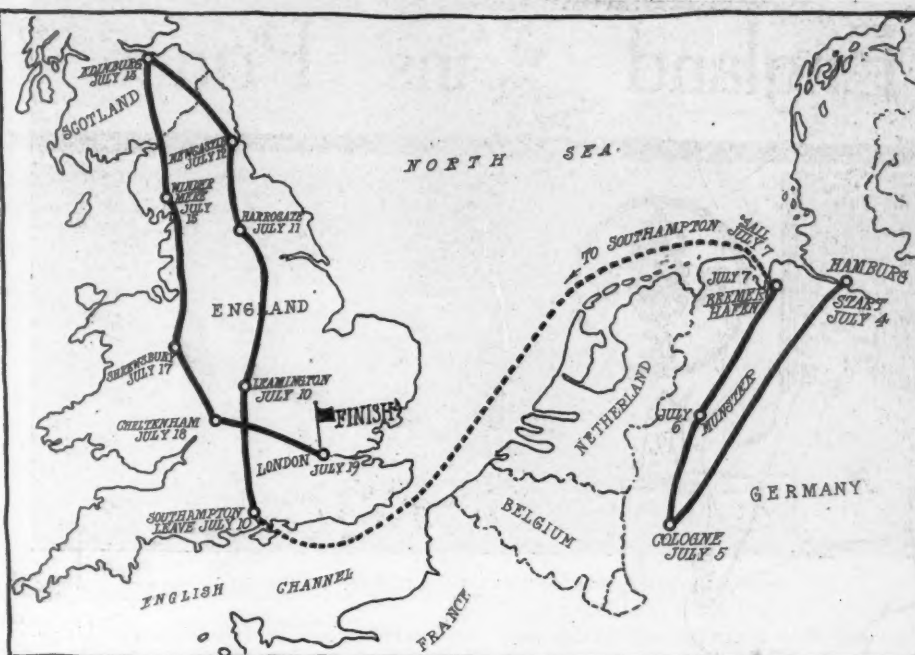
Great enthusiasm was manifested in Germany and England over the match, and at every point the tourists received indications of the desire of both countries to appreciate and endorse the main idea of Prince Henry in organizing the tour, namely, that the people of England and Germany should by a friendly sporting event come to a closer relationship. Everywhere the two teams were shown the greatest hospitality, so much so that one driver actually fell asleep and his car went into a ditch. Fortunately no damage was done.

As a competition the event cannot be taken seriously, for it was more a series of social functions than a trial of motor cars. No individual records have been published of the car's performances, the actual marks being charged to one team or the other. Throughout the tour Prince Henry was prominent, starting on time each day. At the night controls he donned overalls and with his chauffeur attended to the necessary adjustments.

#### Rules Of the Tour

The tour for the Prince Henry cup was a friendly and social match between the Imperial Automobile Club of Germany and the Royal Automobile Club of Great Britain. The object of the tour was to combine pleasure with a practical test of the touring capabilities of the competing cars. There were no speed trials nor timed hill climbs.

In June, 1909, H. R. H. Prince Henry of Prussia, K. G., first suggested that it would be interesting if a competition for a cup, to be given by him, could start in Germany and finish in England, and King Edward VII. viewed the suggestion with approval. The matter was submitted to King George V., who expressed his hearty approval, and gave instructions that the



ROUTE FOLLOWED BY ENGLISH AND GERMAN TEAMS

regulations were to be submitted to him.

In Germany the tour was controlled by the K. A. C. with the assistance of the R. A. C., and in Great Britain by the R. A. C. with the assistance of the K. A. C.

The entries, which are limited to fifty German and fifty British cars, were provided by the respective clubs, and the car entered by a competitor had to be absolutely his own property. The country of origin of the cars entered was not limited to Germany and England, but cars of any nationality could compete.

#### Advertising Eliminated

In order to avoid advertisement neither the name of the car nor the manufacturer's name was published in any way officially in connection with the tour, nor could any car carry more than the ordinary recognized trade mark as used on the cars sold for private purposes.

The competition was open to cars fitted with four or six-cylinder motors, the limits of the bore of the four-cylinder engine to be not less than  $3\frac{1}{4}$  inches, nor greater than  $5\frac{1}{2}$  inches; and for six-cylinder engines to be not less than  $2\frac{1}{2}$

inches, nor greater than  $4\frac{1}{2}$  inches. The maximum stroke was limited to 6.5 inches.

All the cars had to be of a recognized tourist type, and had to be fitted with:

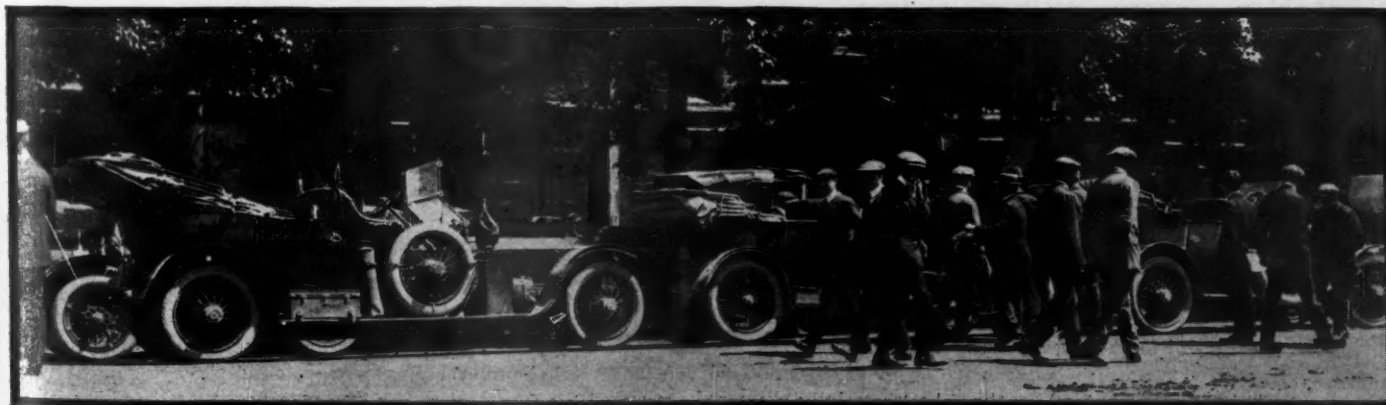
- 1—An efficient silencer. Cutouts, if fitted, securely fastened so that they could not be used.
- 2—Two independently acting brakes.
- 3—Two side lamps and a tail lamp ready for use.
- 4—Wind screen and complete overhead protection against the weather.
- 5—A single-note horn.
- 6—A speed indicator.

All car bodies had to be capable of affording comfortable accommodation for not fewer than four passengers, and conform to the orthodox and recognized forms of pleasure cars.

At least three persons had to travel on each car, namely, the driver, the observer, and the driver's assistant.

All bodies had to be properly and completely upholstered, painted and finished.

The entrance fee for the tour was \$220, which included transportation from Bremerhaven to Southampton of the car, driver and driver's assistant.



ENGLISH AND GERMAN TEAMS STOP FOR BREATHING SPELL AT OXFORD, ENGLAND



CHICAGO MOTOR CLUB TEAMS EN ROUTE TO ST. JOE

The observers consisted of British and German officers, the British officers being all located to the German cars, and the German officers to the English cars.

All drivers were placed on their honor to make the necessary disclosures as to the cause of the various stops which occurred, and the observers on their honor to record them.

All involuntary stops counted against the car, the basis of marking being 1 mark for every stop of 5 minutes or part thereof. Engines could be stopped during tire troubles, and also during voluntary stops. The term "involuntary stop" covered every stop made for purposes of repair or work relating to the operation of the car, including the lubrication of parts, and the replenishing of cooling water, oil or fuel; it excluded, however, work rendered necessary by damage to inner tubes or outer covers.

#### Parts Penalization

Any spare part or parts could be placed on the car at the start on the tour without penalty, and these spare parts could be used without loss of marks for material. Any spare part acquired at any point after the tour started caused a loss of 12 marks to the car for material. These marks will be additional to the marks for time lost when the material is used.

The bonnets of the cars were sealed. The seals could only be removed by the observers, who, after the completion of the necessary work, had to personally re-affix the seals.

The replenishment of the water, fuel, and lubricants during running hours—that is, between the start and finish of the day's run—counted as an involuntary stop for the time occupied.

No work whatever except the washing of the car, for which special provision was made, could be done on the car unless, with the permission and in the presence of the observer, and under no circumstances could any work be carried out while the car was in motion. No work could be done

on the car except by the driver and his assistant.

Thirty minutes' work for replenishments, lubrication, adjustments, etc., for which purpose the bonnets were unsealed by the observers, was permitted on each car each day before the start in the morning without loss of marks. If, during this time, a spare part be used which was not on the car before the start of the tour the car lost 12 marks for material. If the work was not finished in the 30 minutes allowed the car lost 1 mark for each 5 minutes or part thereof in excess of the 30 minutes.

In the case of a car falling out altogether, 50 marks will be lost per day until the end of the tour by the team to which the car belongs. This regulation did not apply to non-arrivals at the starting point, whose places were taken by reserve cars.

The cars would be washed each evening, on arrival at the destination, either by the driver's assistant or under his supervision. It had to be stated on the entry form whether or not the driver's assistant would wash the car throughout the tour, in order that labor might be provided if necessary.

The cars were locked up and guarded each night. The driver and the observer must take the car to the storage depot, where, after it has been washed, it must be left for the night in the charge of officials appointed for that purpose. No one except these officials were allowed access to the storage depot until the following morning.

#### The Teams in England

London, July 12—After a successful tour of 3 days in northern Germany the teams representing the British and German clubs in the competition for the trophy given by Prince Henry of Prussia, arrived at Southampton on Sunday last in the steamer *Grosser Kurfurst*, which had been specially chartered to convey the cars and passengers from Bremer harbor.

Sixty-five cars started from Hamburg at the beginning of the competition, and so far only one has been compelled to retire, namely, the car belonging to J. P. H. de la Croix, which was disabled by breaking its axle. It will be thus seen that the Imperial Automobile Club of Germany is now represented by thirty-six cars and the Royal Automobile Club by twenty-eight. The odd numbers are borne by the German team, which also carry its national flag on the right hand side of each car, while the British team carries even numbers, and the union jack similarly placed, each team hoisting the other's flag on the left hand side of each car.

#### Everyone Has Good Time

It is obvious that the social side of the competition has not been lost sight of. The majority of the places of interest along the route will be visited, and in a great many instances invitations have been issued to the tourists to view historic mansions, etc.—for instance, at Leamington, the first day's halt, the tourists were entertained by E. Manville, who is driving the car nominated by H. R. H. the Duke of Connaught. On Tuesday, the 11th, His Grace the Duke of Portland, K. G., personally conducted them, by his private roads, to Welbeck Abbey, and a luncheon was given in the famous underground ball-room. After viewing the sights of Welbeck the duke then again led the party through Welbeck park to Clumber park, the seat of the Duke of Newcastle. Today, by permission of the Marquis of Ripon, the grounds of Fountains abbey, one of the most celebrated show places in Europe, were thrown open.

#### Entertainments in England

At Newcastle special arrangements have been made for a gala performance at the theater. On Thursday His Grace the Duke of Northumberland, K. G., has arranged for a view of the famous castle and grounds of Alnwick, where His Grace will also provide luncheon. July 14, in Edinburgh, the tourists will be permitted to view the historic apartments in Holyrood palace. On Monday, July 17, the tourists will receive the hospitality of the Earl of Derby at Knowsley Hall. On Wednesday, July 19, again the tourists will be the guests of the Duke and Duchess of Beaufort at Badmington House, and after the luncheon a jury of women will inspect the cars and decide which shall be the recipients of the special appearance prizes offered by H. M. the Queen, H. I. M. the German empress, and H. R. H. Princess Henry of Prussia.

On Thursday, July 20, after the return to London, a special racing and flying meeting has been arranged at Brooklands, and during the afternoon the cars which have taken part in the tour will be paraded and make a circuit of the track. In the evening a banquet will be held at the Royal Automobile Club, when the various prizes will be distributed to the candidates on both teams.



# Amateur Drivers Capture Team Match

CHICAGO, July 22—Chicago always is springing something new and novel in the way of motor competitions, but undoubtedly the most enjoyable affair ever promoted by the Chicago Motor Club was the team reliability match between the amateur and trade members of the club, with which was combined a field day at the night stop, in which contestants had a chance to demonstrate their skill in athletics other than motoring. The team match took place Thursday and Friday of this week and resulted in a victory for the amateur team, which defeated its trade rival by a score of 221 to 287.868.

The match was to St. Joseph, Mich., and return, a distance of 105 miles going and 117 miles returning. The first day's trip was remarkable for the showing made by the amateurs, who only had one down—Charley Anderson, who killed his motor. On the other team Charley Van Sicklen, William Roesch, W. D. Foreman and Harry Cooper were penalized for motor stops, Webb Jay found water in his gasoline, Tracy Holmes burned out a bearing, while Harry Watts made a steering gear adjustment.

Coming home the second day more perfect scores were eliminated. On the amateur team Sinsabaugh had ignition trouble and never got away from St. Joe; N. H. Van Sicklen, Sr., was penalized when a chain jumped the sprocket; Claude Anderson was demerited heavily for work done, while Gaidzik and Laramie had motor stops. Charley Van Sicklen of the trade team changed a spark plug, Gregory had a motor stop, and Watts did work and was arrested for scorching.

The trade team had sixteen drivers and the amateurs fourteen, therefore the dealers only were penalized 14-16 of a point instead of a full point. This drew the finish fine, because for a time it looked as if Claude Anderson would not finish. The affair being confined to club members, it was not necessary to take out a sanction. The rules penalized for work done and for being late at controls.

The field day sports were enjoyed by everyone. The baseball game was good, but the other events were more interesting. Swimming, golf, running, jumping, pool and bowling kept everyone interested and resulted in a new set of champions.

## MANY WILL ATTEND MEETING

Portland, Ore., July 23—Good roads enthusiasts from all parts of the Pacific northwest will participate in the deliberations of the Pacific Highway Association, when that organization holds its annual meeting in Portland on August 4 and 5. Indications are that the gathering will be one of the most largely attended in the history of that body.

## Tradesmen Defeated in the Chicago Motor Club's Reliability Contest Which Is Similar to the Prince Henry Tour

At the Portland convention a motion picture lecture will be given by Samuel Hill, of Seattle, on highway construction in the United States and Europe. The entire evening will be turned over to Mr. Hill, who has traveled extensively throughout the United States and foreign countries, paying particular attention to the

building and maintenance of public thoroughfares.

The good roads situation in the northwest will be gone over thoroughly at this meeting, and through the reports by the individual representatives from various places along the route of the Pacific highway, the officers of the organization will be enabled to determine whether the Pacific highway will be completed from Vancouver, B. C., to California by 1915. It is in that year that the Panama exposition will be held in San Francisco, and it is hoped to have the trunk road in condition for motor travel by that time.

## TOURISTS IN THE ROCKIES

Laramie, Wyo., July 23—Being caught in a cloudburst on a mountain range may be exciting for some and commonplace for others, but it was a weird experience that was not particularly enjoyed by the Premier ocean-to-ocean tourists. The entire trancontinental party of forty persons in ten cars was caught on the Medicine bow range of the Rocky mountains by a veritable deluge of water, which quickly made the roads impassable and caused a stop for the day.

The eight women of the party, including Countess De Calatrava, a Spanish noblewoman, were compelled to sleep in a barn 22 miles from Fort Collins, Colo. The men were not even that fortunate. They made the best camps possible in the open, although the elements were so rough as to make their army tents inadequate. The party crossed the Colorado line and entered Wyoming at 9 a. m., making Laramie the noon control.

Rawlins, Wyoming, was the next control, 150 miles away. Barring the wetting the amateur owner-drivers and tourists were none the worse for their experience in the cloudburst.

## CHICAGO TEAM SCORES

### AMATEUR TEAM

No.	Driver and car—	First day	Second day	Tot.
1—	David Beecroft, Abbott-Det.	0	0	0
3—	N. H. Van Sicklen, Sr., App.	0	1	1
5—	C. G. Sinsabaugh, Abbott-Det.	0	150	150
7—	C. G. Heywood, Buick.....	0	0	0
9—	George Knab, Pierce-Arrow.	0	0	0
11—	J. H. Smith, Halladay.....	0	0	0
13—	C. K. Anderson, Mitchell...	1	0	1
15—	G. W. Gaidzik, Premier.....	0	1	1
17—	J. G. De Long, Halladay....	0	0	0
19—	F. W. Jencks, Welch.....	0	0	1
21—	A. C. Berthold, Cadillac....	0	0	1
25—	T. F. Laramie, National....	0	1	1
27—	Claude Anderson, Empre....	0	67	67
33—	J. C. Kinsely, Marmon.....	0	0	0
Total.....		1	220	221

### TRADE TEAM

No.	Driver and car—	First day	Second day	Tot.
2—	C. F. Van Sicklen, Ford....	1	1	2
4—	C. E. Gregory, Chalmers....	0	1	1
6—	Thomas J. Hay, Ford.....	0	0	0
8—	J. P. Frisby, Staver-Chicago.	0	0	0
10—	Gaylord Warner, Thomas....	6	0	6
12—	H. C. Watts, Alco.....	2	63	65
14—	Webb Jay, Rambler.....	105	0	105
16—	E. T. Wells, Imperial.....	0	0	0
18—	Wm. Roesch, Pierce-Arrow..	1	0	1
20—	W. E. Stalnaker, Premier..	0	0	0
22—	W. D. Foreman, Oldsmobile..	1	1	2
24—	H. W. Cooper, Chalmers....	3	0	3
28—	Tracy Holmes, Corbin.....	150	*	150
30—	S. Breakstone, Special....	0	0	0
34—	A. M. Robbins, Abbott-Det..	0	0	0
36—	E. J. Malloy, Mora.....	0	0	0
Total.....		263	66	329

Fractional penalization 287.868

\* Withdrew



CHICAGO MOTORISTS AT EDGEWATER GARAGE, ST. JOE

**NEW YORK OFFICE**  
239 West 39th Street

# MOTOR AGE

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## Reduce Cost of Operating Cars



**E**XTRAVAGANCE is stopping many people today from buying cars. The medium-class prospective buyer hears of a cost of \$150 per month to operate a car and care for a chauffeur by a local citizen and imagines that these expenses with a lower-priced car will be a little higher than a pro rata basis. He figures he can eliminate the chauffeur and also calculates that a chauffeur is more or less of an investment, as he can make repairs, whereas without him many of these repairs might have to be taken to the garage, which would add to the expense. There are scores of citizens debating whether they will buy cars or not because of this condition of affairs. They have money enough on hand to buy a medium-priced car, but they feel that the expenses of ownership would probably be greater than they would care to undertake.

**T**HIS is a regrettable situation, and it is an erroneous situation. It is a fact that the owner of high-powered cars, with highly-paid chauffeurs or drivers and big garage expenses, has a heavy monthly maintenance bill to meet; but it would be just as sensible for any one to say that a man could not buy a single horse and buggy because the expense of owning a four-horse outfit, with elaborate trappings, is expensive. Comparisons are out of the question, and the prospective buyer who refrains from purchasing on the imagined cost of upkeep is in many cases in error. The cost of upkeep of a car, to a very great extent, depends on the owner and driver. He can make the upkeep low, or he can make it very high. If he does not keep his tires inflated; if he does not keep his carburetor adjusted to the economic point; if he drives at high speeds; and if he does a dozen other things, he is sure to make his repair bill high, because he will rack his car. High speed is the most expensive thing in conjunction with a car. There is hardly a driver who estimates the real cost of speed. The destruction increases not in direct proportion as the speed increases, but according to the square, or even the cube. A car can be driven at 25 miles an hour with comparative ease, but doubling the speed to 50 will work a rapid ruin, four times as great as at the 25-mile rate. There are many reasons for this: Traveling at 50 miles per hour the driver may have to avoid a hole in the road. To do this he has to violently apply his brakes and perhaps skid the wheels. This wears out the brakes, strains the entire running gear, and works ~~2000~~ to the tire.

**I**GNORANCE is the cause of much extravagance in conjunction with a car. The driver is not familiar with the smallest details and has to go to the garage or repair shop for every little derangement. In the majority of cases the garage man overcharges for the actual work done. It would pay the owner to obtain a better knowledge of his car and so be able to eliminate this quite unnecessary expense.

**M**ANUFACTURERS are realizing that by their co-operation with their car owners this so-called expense problem can be eliminated. The United States Motors, by its free inspection department, has taken a commendable step in this direction. By it an owner being enabled to have his car inspected once a

month, is assured of detecting little troubles before they come into dangerous proportions. These inspections will reveal little defects that can be corrected at a minimum expense, but if allowed to go for weeks or a month might result in the derangement of other parts and a big repair bill. This is an admirable way of reducing extravagance, if the term may be used, in conjunction with the operation of motor cars. Not only will this reduce the expense, but it will serve as an educator to the car owners, as it will be impossible for any owner to see his car given a short inspection without being able to learn many details connected with the machine which he might not have known of before. This scheme should work much good for bringing the expense of operating the car down to its legitimate mark. In this way those who are a little frightened over the expense of operation will be reassured and the general result should be of big assistance to the motor car industry, particularly with those buyers of low and medium-priced cars.

## Developing the Amateur



**I**NTERNATIONAL touring contests have been given a boom by the recent Prince Henry tour, in which a team of amateur car owners from Germany contested in friendly spirit against a team of amateur car owners in England. Manufacturers were strictly barred from the contest. It is not known exactly what inspired Germany to change its Prince Henry classic from a tour contested in by manufacturers with their expert drivers to a tour for amateurs. No matter what the reason for this change may have been, the result has been phenomenal. The tour has attracted more attention from the public point of view than ever before. The public felt that it was a tour for themselves, in which private citizens drove, and they felt that what one private citizen could do they themselves should be able to do. This tour might better be named an inspiration tour because it has already created in the minds of thousands the feeling that they also can tour and tour successfully. This means

much to the motor car industry. There is not enough touring. The towns and cities are getting filled with cars, but so many of them are afraid to leave the boulevards and invade the country roads. In many cases there are good reasons for this fear. The conditions of the roads are such that they are only passable in dry weather. It is, however, valuable to have the public feel that their own members can tour continuously for several days and that the car is not such an intricate problem or such a white elephant possibility.

**T**HIS same lesson is being admirably taught in America by the inter-club contests which started in Chicago 3 years ago. These contests have been largely for amateur owners. Many of these owners never ventured into the country until these tours were started, but since they have become confirmed tourists and enthusiasts of the real motor car spirit. This enthusiasm is what is needed. If a man never gets into the country his car becomes to him a utility, having little more meaning to him than the electric trolley car or the steam train, being merely a convenience. As such he will not talk it to his neighbors and will not spread the gospel of the car which it is so necessary to have at present.



# France Adopts New Traffic Rules

PARIS, July 15—No half measures are being adopted by France in the revision of its rules and regulations governing traffic. Not only will the new code de la route provide for the abolition of all speed limits, but it changes the rule of the road from the right to the left. In other words, the English system of driving on the left and overtaking on the right will be adopted. The new code de la route is the work of a special committee of experts appointed by the minister of public works to formulate a set of road regulations to suit modern conditions. The committee has just completed its work, its code is about to be submitted to the minister, and it is to be assumed that its adoption will be but a matter of a few weeks, there being no necessity to submit the regulations to parliament before putting them into force.

## Advantages of Left Driving

Among those who have studied the question it is now admitted that the English rule of the road has decided advantages—it allows the driver to look ahead and see if the road is clear before attempting to overtake a vehicle, this being a considerable advantage in traffic work; men who are leading horses are placed on or near the footpath, whereas with the present system they must occupy the middle of the road, with the danger of being caught by passing vehicles, even when their teams are keeping to the right; under the English rule of the road, cars are always drawn up with the passenger's side next to the footpath, whereas under the French system passengers have to walk round the car, sometimes at considerable risk to themselves; drivers who have handled cars under the two systems are of the opinion that the habit of keeping to the left is acquired much more readily than that of holding the right-hand side of the road.

## Drivers Must Be Careful

In addition to stipulating that all vehicles, teams and animals must travel on the left-hand side of the road, the code declares that drivers of teams must always be in such a state and in such a position that they can guide or lead their animals, and that they must never abandon the reins. Drivers may use the middle or the left-hand side of the road, but it is formally forbidden to travel on the right-hand side. This regulation makes it impossible for drivers to sleep in their wagons or to follow on foot several yards in the rear. Up to the present there has been no law on this matter, and it has even been decided by the courts that a motor car driver was guilty for not stopping his car at the first signs of fear on the part of a team, while the horse driver, who was following 100 yards in the rear, incurred no responsibility. It is forbidden to travel with more than two teams linked

Hereafter Motor Cars and Horse-Drawn Vehicles Must Use Left Side of Road—Every Rig Must Carry a Light at Night—Speed Limits



\*August 3-4-5—Galveston beach races, Galveston Automobile Club.

\*August 7-17—Reliability for trucks, Chicago Evening American.

August 10-12-13—Races on Gearhart beach, Portland Automobile Club, Portland, Ore.

August 12—Worcester hill-climb, Worcester Auto Club.

August 12—Reliability run of Quaker City Motor Club, Philadelphia.

August 17—St. Louis reliability run, Missouri Automobile Association.

\*August 25-26—Elgin road races, Chicago Motor Club.

September 1—Oklahoma reliability run, Daily Oklahoman.

September 2-4—Brighton Beach races, New York.

September 7-8—Philadelphia track meet, Philadelphia Automobile Trade Association.

September 7-8-9—Track meet, Minnesota State Automobile Association, Hamline track, Minnesota.

September 7-10—Reliability run of Buffalo Automobile Club.

September 12-13—Track meet, State Automobile Association, Grand Rapids, Mich.

September 15—Track meet, Appalachian exposition, Knoxville, Tenn.

September 16—Track meet, Automobile Club and Dealers, Syracuse, N. Y.

September 18-20—Reliability run for trucks of Chicago Motor Club, Chicago.

October 3-7—Track meet, Danbury, Conn., Agricultural Society.

October 7—Fairmount Park road race, Philadelphia.

October 9-13—1,000-mile reliability, Chicago Motor Club.

October 16-18—Reliability run of Harrisburg Motor Club.

November 1—Track meet of Waco Automobile Club, Waco, Tex.

November 2-3-4—Reliability run of Quaker City Motor Club, Philadelphia.

November 9-11—Track meet, San Antonio Automobile Club.

November 4-6—Phoenix road race, Maricopa Automobile Club.

November 9—Track meet of Maricopa Automobile Club, Phoenix, Ariz.

November 27—Vanderbilt road race, Savannah, Ga.

November 30—Grand prix race, Savannah, Ga.

November 30-December 2-3—Los Angeles motordrome.

December 25-26—Los Angeles motordrome meet.

January 6-20—Madison Square Garden show, New York City, Automobile Board of Trade.

March 13-20—Show of Boston Commercial Motor Vehicle Dealers' Association, Mechanics' building, Boston.

January 1-7—Grand Central palace show of Automobile Manufacturers of America, New York City.

January 10-17—N. A. A. M. show in Grand Central Palace, New York.

January 27-February 10—N. A. A. M. show in Chicago.

\*Sanction already issued

together in Indian file, and if the leading wagon is drawn by two horses the second must have but one, while the total over-all length of the team must not exceed 82 feet.

No vehicle is allowed to travel on the road at night without at least one lantern giving a brilliant light, and in future all vehicles and not merely motor cars must carry a plate with the owner's name and address visibly engraved upon it. When cattle are driven over the road they must be guarded by a sufficient number of men, and they must not occupy more than half the highway. They must always be in movement. It is also forbidden to allow any domestic or other animals to wander unattended on the highways.

## Traffic at Cross Roads

The method of dealing with traffic at cross roads is interesting. At present all roads in France are classified according to their nature and importance, and as this classification is mentioned on all sign and distance posts it is well known to road users. The code stipulates that the relative importance of the roads is in the following order: National highways, departmental highways, chemins de grande communication, communal roads, vicinal roads and ordinary roads. Traffic on a lower road always must give way to that on a higher one. Thus the driver on a departmental highway must take every precaution before entering into or crossing over a national highway, the same applying to all the lower roads. When two roads of the same class come together, each driver must keep to his left, so as to leave fully half the road free while crossing over or making his turn.

## The Matter of Speed

The article dealing with speed states that "all motor car drivers must at all times retain full control of their cars. The speed never should be such as to damage the road or works connected with it. Every driver must go slowly or stop whenever the conditions or circumstances are such that his vehicle is likely to cause an accident, create disorder or upset free circulation; this must be borne in mind particularly when taking turns, coming down steep grades, passing or overtaking other vehicles or animals and when traveling through built-up portions. Speed always must be moderate in towns and at nightfall."

This regulation is the one that will cause the least difference to present conditions, for although there is now a speed limit in France, it has long been recognized as inapplicable. The principal difference under the new system will be that it will be impossible to place the responsibility of an accident on the motorist merely because he was exceeding an arbitrary local speed limit; negligence will now have to be proved.

# Hemery in Fiat the Grand Prix Winner

**Only One Finishes in French Road Race—Fourteen Start and Many Fall by the Way-Side—Maurice Fournier and His Mechanic, Louvel, Killed**

PARIS, July 24—Special cablegram—Of the fourteen cars that started in the French grand prix today, only one covered the full distance, 402 miles. The survivor was Hemery, who carried No. 13 on a Fiat, which is the same model as those used in the American grand prix at Savannah last fall. Hemery went the distance in 7:06:30, an average of 56.54 miles per hour.

When the race was called off the little Bugatti, driven by Friederich, was in second position, with Leduc in a Cote and Gabriel in a Rolland-Pilain far in the rear. The Bugatti made ten rounds, 334 miles, in 7:16:50; Gabriel went nine laps in 8:04:38 and Leduc eight circuits in 6:19:33.

During the seventh lap the race was marred by an accident which resulted in two deaths, Maurice Fournier and his mechanic, Henry Louvel, being killed. Fournier was in second place behind Duray and was being chased by Hemery on the straightaway. As Hemery was passing the front axle on Fournier's car broke in the middle. The car, just missing Hemery, went into the ditch and caught fire.

Duray led in the race during the fourth, fifth and sixth rounds, then was passed by Hemery in the Fiat. On the ninth round Duray's de Dietrich went out with a broken differential. After this there was no interest in the race, for the Fiat had a lead of more than an hour over the 8-horse-power Bugatti. Hemery made one round



FINE STRAIGHTAWAY ON THE GRAND PRIX CIRCUIT



ONE OF THE 8 TURNS ON THE SARTHE CIRCUIT

at 68 miles an hour. After leading the first round Deydier in the Cottin-Desgouttes retired with a broken steering gear. Fauguet, who was second in a Pilain, overturned on a curve. The grand prix Porthos cracked a cylinder; Rigal in a Rolland-Pilain broke a front axle, while Gabriel was held back an hour by magneto trouble. The drivers felt the great heat, it being 105 in the shade.

It was at first intended that the grand prix de France should be for two types of cars only—racers without any limitation of weight or power, and cars having a four-cylinder motor not exceeding 4.3 by 7.8 inches bore and stroke. Largely owing to the opposition of the Chambre Syndicate des Constructeurs, entries were difficult to obtain, and even after a full Lorraine-Dietrich team had been secured the Constructors' Syndicate used its influence to such effect that the cars had to be withdrawn. Later it was resolved to admit the light cars provided for in the recent Boulogne race, the conditions being a cylinder area of 3 liters, a minimum weight





PASSING THROUGH ST. MARS D'OUTILLE

of 1,763 pounds, with no stipulations regarding mudguards, running boards, size of body, etc. The result was the obtaining of over twenty cars unfortunately too varied in size and power to make the race really valuable. Almost at the last moment the Lion-Peugeot team was withdrawn after being the first to enter; the Sizaire-Naudin team, after being promised, failed to start and the racers from America did not materialize.

The club had the advantage of possessing one of the finest and fastest courses to be found in France. Starting from the very suburbs of Le Mans, and less than 2 miles from the center of the town, it comprised an absolute straightaway down National Highway No. 158, a hairpin turn into the Chemin de Grande Communication No. 20, with a few very easy bends and no grades, then another hairpin turn into Route Departemental No. 3, a straightaway of such length and width as can be found nowhere out of France. The triangular course touched no village of any importance and measured roughly  $33\frac{1}{2}$  miles round, or exactly 402.6 miles for the twelve rounds. The course is not the one on which the 1906 grand prix was run, and in the opinion of race drivers is very much faster than this latter. At the Pontlieue turn, the point of the course nearest to Le Mans, the grandstands and pits were installed. This arrangement allowed the spectators to watch the cars on the two straightaways, to see the work of the drivers on the turn and to enjoy the exciting incidents of the tire and gasoline station. The course was very carefully guarded by 1,100 soldiers and 100 gendarmes, and in addition nearly 1 mile of stout barriers had been erected in front of the houses on the course and on the turns.

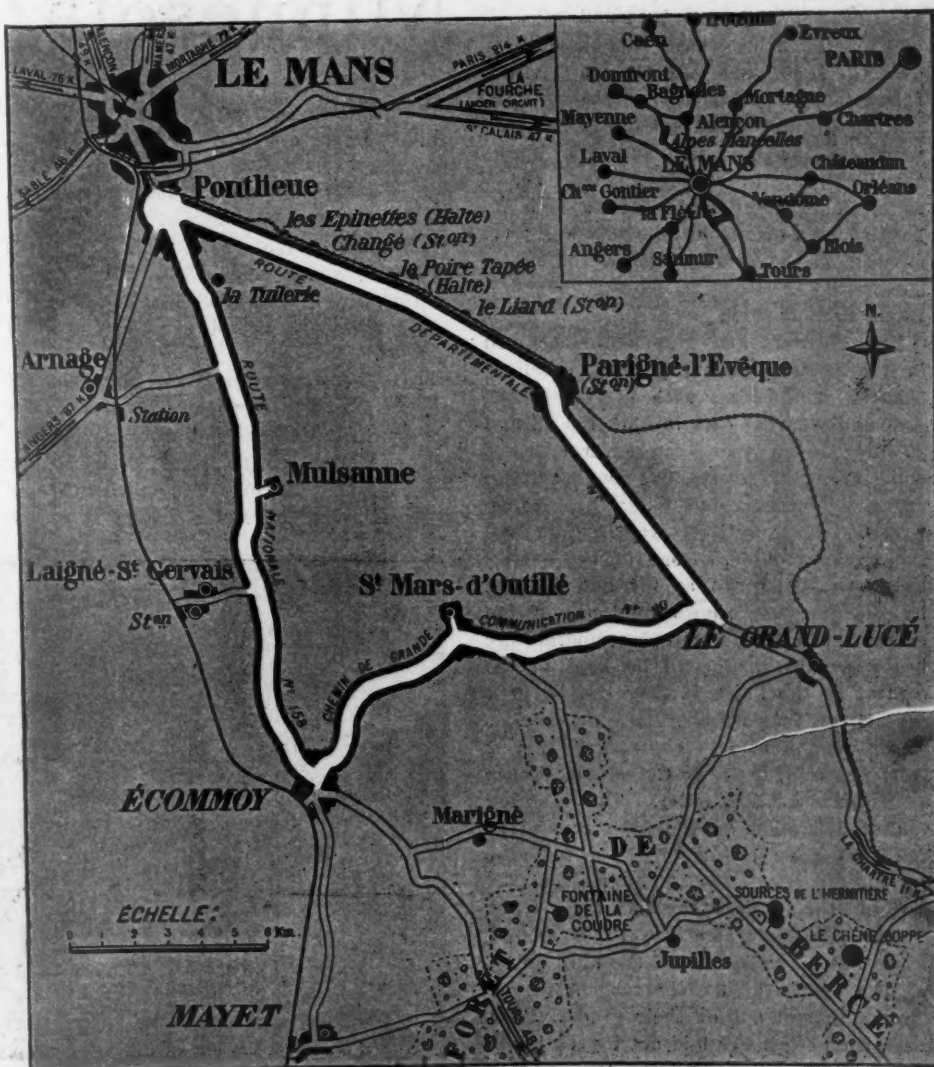
The first car was sent away at 8 a. m. and the others at intervals of 1 minute. The entrants secured 15 days before the

start were as follows: Rolland-Pilain, Gabriel; Rolland-Pilain, Rigal; Rolland-Pilain, Fauguet; Cote, De Vere; Cote, Ollier; Cote, Ledue; Excelsior, Paul Riviere; Excelsior, Tom Enlow; Ford, Henry Depasse; Ford, Boulay; Porthos,

Anthony; Koecklin, A. G. Koecklin; Mathis, Dragutin Esser; Bugatti, E. Friederich; Bugatti; Excelsior, Arthur Duray.

In addition it was expected that Grecoire would put in two cars to be driven by Porporato and De Marne, that the full Alecyon team with Wagner, Barriaux and Page would be entered, as well as one S. P. A. and a few amateurs' cars. The three Rolland-Pilains had been built for the 4.3 by 7.8 class; the Cote cars were the two-cycle models which had been seen at Boulogne; the Excelsior cars were also those which took part in the light car race; the two Fords were the standard T models, having lighter reciprocating parts, bigger valves and a racing body; the Porthos was a 1908 grand prix racer, and naturally ran in the unlimited power class; the Koecklin was the two-cycle model which has been prepared too late for the Boulogne event, and the Mathis was the same car and same driver as were seen in the light-car race.

The two Bugattis were obliged to run in the unlimited power class, owing to their low weight. The motor on each was a four-cylinder monobloc of  $2\frac{1}{2}$  by 4.3 inches bore and stroke with an overhead camshaft and valves carried vertically in the head of the motor.



SARTHE CIRCUIT OVER WHICH GRAND PRIX WAS RUN



CONTESTANTS IN THE TOUR OF THE MINNESOTA STATE AUTOMOBILE ASSOCIATION FROM ST. PAUL TO HELENA, MONT., IN

CULBERTSON, Mont., July 25—Special telegram—With half of the tour from Minneapolis to Helena, Mont., completed, there are eleven cars with clean scores out of the nineteen entries. This record is very good in consideration of the rough travelling encountered, especially during the last 2 days. Some of the cars that lost their clean slate were only assessed a few points for minor troubles.

The feature of the run thus far is the excellent showing made by small cars. It was predicted by those that have been over the route that only the more powerful entrants would be able to negotiate the route and sandy hills that lay in the road between Devil's Lake and Culbertson. The little cars are coming in with sheets as clean as their larger mates and are keeping up to their 18 mile schedule fully as well as the others hold to the faster one.

#### Little Cars Survive

The Flanders and Hupmobile are still in the perfect class and have excellent chances of finishing with perfect scores. Among the larger cars in both the 18 and 20-mile classes there are several scores which are yet to see the first penalty. These are the Marmon, one Kisselkar, Pierce-Arrow, Abbott-Detroit, Hoyt's Cole and the Packard entry. None of the entries has been withdrawn so far and judging by the gameness shown by those of the entrants who have received comparatively heavy penalties, all will be kept in the contest to the finish if they can be kept running on four wheels.

The portion of trip covered today was from Berthold, N. D., to Culbertson, Mont., a distance of 164 miles. The morning run of 113 miles to the noon control at Williston gave the motorists a taste of varied scenery. For 25 miles out of Berthold the tourists travelled over virgin prairie through which the trails wound in and out over and around the hills, skirting the brinks of treacherous coulees or dipping in and out of their grades. The roads were originally laid out by the herds of buffalo that once roamed the prairies and their twisting trails with the innum-

## Third Annual Tour of the Minnesota Association

able branches that strike off at all angles make the route impossible to follow without the services of a guide. At times the tourists were 15 miles from the railroad. The afternoon run skirted the Missouri river most of the way. High clay bluffs rose on one side, their sides worn into fantastic shapes, while on the other the tortuous Missouri wound through beautiful valleys.

The motorists reached the night control early in the afternoon and were then carried in the tourist special to Poplar, the headquarters of the Fort Peck Indian reservation. As the train pulled into the station, scores of Indians, togged in all

their war paint and head dresses, rushed upon their gaily decorated ponies with a fusillade of shots and war cries. The red men escorted the tourists to their camping grounds, a circle of tepees several miles in circumference, and there treated them to a sham battle and a series of war dances. The closing feature was a squaw dance, in which many of the men and women tourists joined.

#### Getaway from Minneapolis

Minneapolis, Minn., July 20—Because of a clash over the stock-car registration clause of the A. A. A. it was necessary to reclassify the field that started this morning in the third annual tour of the Min-



START OF THE TOUR FROM THE TWIN CITIES





FRONT OF GREAT NORTHERN SPECIAL TRAIN ACCOMPANYING THE TOURISTS AND WHICH IS USED AS A TRAVELING HOTEL

## From the Twin Cities to Helena, Montana

nesota State Automobile Association, which is headed for Helena, Mont. The reclassifying reduced the field to nineteen, and resulted in another class being arranged in which the Pierce-Arrow, Packard and Kisselkar are contesting.

The new classification was made necessary by the fact that the manufacturers of these three makes of cars did not file the stock certificates with the A. A. A. before the 30-day limit prescribed by the rules of the contest board.

At the final meeting of the contestants and observers at the Commercial club the final instructions were given. Pilot C. S. Harrington outlined at the meeting the

new system of flagging cars. A red flag indicates danger a short distance ahead; a checkered flag indicates a change of route and that the confetti is to be followed closely; a yellow flag means to keep straight ahead. Referee Dutton cautioned the contestants that motors must be kept running while tires are being repaired. Penalties will be imposed if the motor is stopped while tire trouble is being attended to.

The tourists on this run are to act as judges of roads at the request of W. H. Horton, president of the Devils Lake Commercial Club. That organization has hung up a handsome silk flag to go to the com-

missioners of the county in a certain section of North Dakota through which the tour passes, which, in the opinion of the tourists, provides the best roads. The flag is to be hung from the court-house flag-staff of the prize-winning county.

There will be a dozen or more women who will make the tour of nearly 1,300 miles from the Twin Cities to Helena.

The tour has been routed so that it parallels the line of the Great Northern railroad nearly all the way, and a special hotel train will accompany the tourists. The train provides accommodations for 150 people and will stop at all the noon and night controls to serve meals and provide sleeping quarters. The train will consist of a supply car carrying tires and other supplies, as well as repair parts for the contesting cars, then a baggage and dynamo car, then two private cars, one of which is the private car of John Ringling, the circus magnate, who is a contestant. Besides these there will be two diners, five sleepers and a compartment press car.

### The First Day's Run

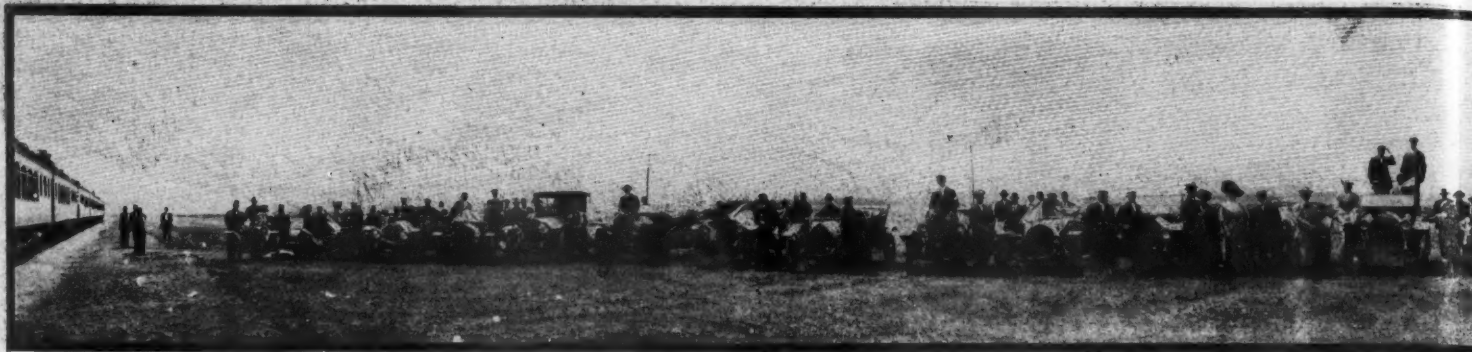
Alexandria, Minn., July 20—At the end of the first day's run all of the nineteen cars entered as contestants checked in at the parking space here with perfect scores. While there were several cases of tire trouble, none was serious and no trouble of any other description was encountered. Today's run of 140 miles was over very good roads, but as worse are to be encountered later, penalties will be sure to accrue.

Besides the contesting cars there are the three official cars, consisting of the pilot car which scatters the confetti by which the contestants can follow the route laid out; the pacemaker, which carries the referee and his assistants, and the press car, with a load of newspaper men. The pilot car is a Halladay, the pacemaker a Corbin, and the press car was supplied by O. A. Britson, of Brookings, S. D. This car is a Pierce-Arrow and is equipped with treads manufactured by the driver.

In addition to these at the start of the run there were three cars which ac-



NOON CONTROL AT ST. CLOUD ON FIRST DAY



DRIVERS AND CARS THAT ARE TAKING PART IN THE TWIN CITY-HELENA TOUR LINED

accompanied the contestants as noncontesting cars. These were the Ringling Pierce-Arrow; Packard, which Louis W. Hill, the president of the Great Northern Railroad, intends to drive as far as Fargo, and a car entered by C. F. Vanduzee.

#### The Line of March

The route of the tour as laid out by Pilot Harrington as pathfinder last spring follows the line of march of the Lewis and Clark exposition and passes through a country of great beauty. A dozen beautiful little lakes were passed in the first day's run to Alexandria from Minneapolis. The country is rolling and the roads wind in and out, but as a rule are in very good condition. Most of the roads are gravel, with some good dirt road and a little sand.

The enthusiasm exhibited by the people along the way today was surprising. In every town and hamlet through which the tourists passed the whole population turned out. At the noon control at St. Cloud the tourists were greeted by a brass band. Not to be outdone, the people of Sauk Center treated the motorists to refreshments and a band concert, while upon arrival at Alexandria, the night control, the music from a boys' band could be heard before the city was reached.

#### One Down Second Day

Fargo, N. D., July 21—At the end of the first 2 days of the Twin City reliability run to Helena eighteen of the nineteen contesting cars checked in at the night control here with perfect scores. The only entrant to suffer penalization was the No. 15 Krit, which was docked 6 points for the replacement of a steering arm which was broken during the afternoon run from the noon control at Barnesville, Minn., when a particularly bad turn was encountered. The car ran into a gully. A new part was installed by the driver, J. E. Dougherty, in the record time of 6 minutes.

While most of the roads of the day's run were very good, some of them were quite rough and required careful driving. A great part of the way lay through prairie land, where there was only the two wheels to form the highway. There has been no rain encountered since the downpour during the start from Minneapolis yesterday morning, and the hard prairie roads therefore are in excellent condition.

Several of the contesting cars nearly lost their perfect scores through the inter-

ference of some farmers a few miles before Fargo was reached. The pacemaking car carrying the referee was unfortunate enough to cause a hay-rick to be upset and the farmers and their hands moved the confetti at a corner. The cars that followed the false lead were decoyed several miles out of the way. The No. 18 Cole went 5 miles off the route and had to speed up over rough roads to check in at the night control on time.

Fargo was reached early in the afternoon and the tourists were met and escorted into town by a delegation of local motorists, who led them to the state fair grounds, where the fair was in progress. In the evening the tourists were entertained by the commercial club of the city. Refreshments were in order during the day at Fergus Falls, where a 20-minute stop was made for the purpose.

#### Reckless Driving of Noncontestant

Devil's Lake, N. D., July 22—With only three cars penalized during the first 3 days of the reliability run, all checked in here tonight on time. None of the contesting cars has had any accidents other than those for which penalties were imposed. Some of the noncontestants have, however, suffered mishaps. The car entered by C. F. Danduzee, a noncontestant, broke a spring near the noon control at Grand Forks, but had a new one installed and it reached Devil's Lake not long after the others.

One of the noncontesting cars which had been causing much comment because of reckless driving is the Packard driven by

Andrew Berkey. For the first 2 days it had been the habit of Berkey to leave controls an hour or so after all the contesting cars and then by fast driving beat most of the cars to the next stop. Between Petersberg and McCanna this afternoon, after passing all the cars but the press car and the pacemaker, Berkey chased the press car for miles through deep gullies and ditches. Finally, to prevent the driver of the Packard from going into the ditch, the press car allowed him to pass. As a noncontestant he was not supposed to pass the pacemaker. He made the attempt, however, at a point where the road makes a sharp S-turn to avoid a deep gully. This point is the most dangerous spot in the road encountered so far, and the drivers had been specially cautioned in regard to it. Notwithstanding the driver of the Packard attempted to run around the pacemaking car at a high rate of speed and the car went over into the gully. It turned completely over and landed in an upright position, Berkey and his companion both jumping as the car turned over and escaped unhurt, although both missed being crushed under the car by only a few inches.

Referee C. E. Dutton, who was in the pacemaking car, says that as this car was not entered as a member of the tour, but was merely accompanying the tourists, it is not amenable to the rules of the contest, and could, therefore, pass the pacemaker. It had no right, however, to jeopardize the other cars.

The car suffered no injuries except a



SPECIAL TRAIN MEETS TOURISTS AT ST. CLOUD





UP BEFORE THE CAMERA BEFORE STARTING ON LONG JOURNEY INTO THE NORTHWEST

broken steering wheel and bent steering post. It was run out of the gulley under its own power and arrived at Devil's Lake a few hours after the contestants.

The state line between Minnesota and North Dakota was crossed three times during the day's run. A control of 20 minutes was arranged at Crookston, where the tourists were treated to coffee and chicken sandwiches, and the tourists commenced the run to Grand Forks, the noon control. After lunch they were escorted by the local motor club to the fair grounds and then to the aviation field, where a very satisfactory flight was made by a local aviator.

The roads from Fargo were excellent, and the tourists ran well ahead of schedule, much to their satisfaction, as it had been reported that bad going was to be

expected. Almost all the way was over smooth, hard gumbo, which makes the finest kind of road when dry, as it was this morning.

Soon after leaving Grand Forks it commenced a rain, which lasted all the afternoon, and the motorists were afforded a sample of wet gumbo. Tire chains became a necessity and even then the cars skidded badly at times. Part of the road was merely a filled pathway through swamps, from which ducks rose in scores at the sound of the cars. A great portion of the way was over flat prairie land, with no fences, trees or other landmarks for miles except the black ribbon of road winding across it. Prairie dogs scuttled across the road and little brown owls flapped languidly away as the motorists went by.

Near Grand Forks groups of Indian

horse traders were passed, their wagons decorated with the red and blue confetti dropped from the pilot car. This was Sitting Bull's old stamping ground.

#### Devil's Lake to Berthold.

Berthold, N. D., July 24—Special telegram.—To-day's run from Devil's Lake to the night control here is said by Howard Kahn, one of the pathfinding party that laid out the route this spring in the same car that is acting as pacemaker in the tour, to be the hardest part of the trip. Few long stretches of good roads were found, and part of the route lay through sand hills with steep grades that required the use of first and intermediate speeds by the drivers of even the most powerful cars.

The Stoddard-Dayton and the Cole were the only cars to fall behind the schedule so far. A broken rear axle sustained when a wrong turn was made and the car run into a coulee laid up the Stoddard for about 2 hours while repairs were being made by a neighboring blacksmith. None of the occupants was injured, but the driver and entrant, J. S. Prior, sent his wife and the observer on to Berthold in passing cars and withdrew the entry from the run, intending to have the repairs made and continue as a non-contestant. Upon his arrival at the night control with the car in running condition Referee Dutton was petitioned by the other contestants in that class to allow Prior to continue as a contestant. The referee then permitted the car to check in as a contestant and assessed the penalties provided for such repairs. One of the passengers in the car who stayed with Prior was appointed observer in place of the one sent ahead so that the Stoddard-Dayton will still be a contestant for the trophy.

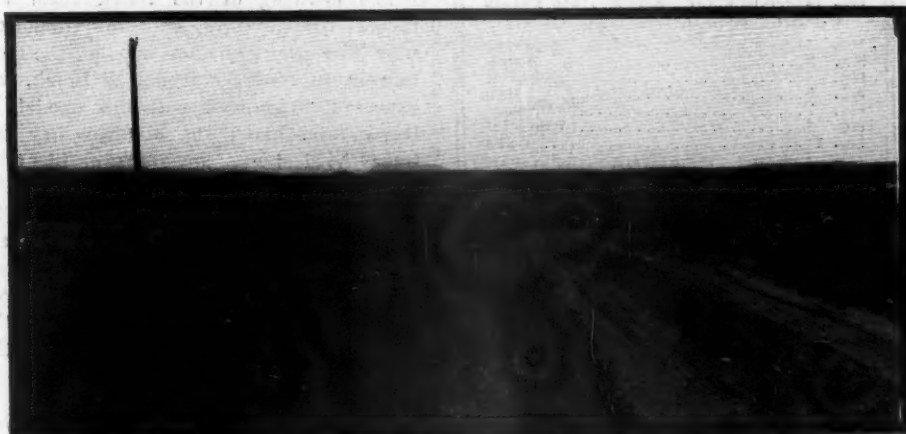
#### Rough Roads Spoil Scores.

Many perfect scores were spoiled to-day by the rough roads. The motor on the No. 3 Amplex was stopped twice by the failure of the hand fuel pump to work. The Halladay No. 4 sprung a leak in the gasoline tank and lost all its fuel, requiring two stops of 15 and 18 minutes respectively. The gas tank was removed and soldered. This car also lost a tire iron and the tail lamp. No. 1 Maxwell broke its fuel pipe after having been on the road only 20 minutes and was detained 12 minutes. The Petrel added to its score by breaking both front springs.

#### STANDING OF CONTESTANTS IN THE MINNESOTA TOUR

No.	Car	Driver	1st day	2d day	3d day	4th day	5th day	Total
1—	Maxwell	O. W. Klose	0	0	0	121	0	121
2—	Marmon	B. Fawkes	0	0	0	0	0	0
3—	Amplex	R. P. Wiseman	0	0	0	6	14	20
4—	Halladay	O. A. Palmund	0	0	0	38	8	44
5—	Kisselkar	C. L. Bonwell	0	0	0	0	0	0
6—	Kisselkar	C. Rice	0	0	0	0	0	0
7—	Pierce-Arrow	J. Suckow	0	0	0	0	0	0
8—	Hupmobile	E. B. Stimson	0	0	0	0	0	0
9—	Abbott-Detroit	A. N. Smith	0	0	0	0	0	0
10—	Stoddard-Dayton	J. H. Prior	0	0	0	*	15	15
11—	Colby	M. G. Armstrong	0	0	2	0	3	5
12—	Flanders	B. M. Scott	0	0	0	0	0	0
13—	Flanders	F. A. Witt	0	0	0	0	0	0
14—	Flanders	G. Herron	0	0	0	0	0	0
15—	Krit	J. E. Dougherty	0	2	38	0	*	40
16—	Petrel	A. L. McNurlen	0	0	0	12	83	95
17—	Cole	B. T. Hoyt	0	0	0	0	0	0
18—	Cole	C. L. Rose	0	0	0	461	0	461
19—	Packard	W. Stork	0	0	0	0	0	0

\* Not decided



SAMPLE OF MINNESOTA ROADS ENCOUNTERED FIRST DAY OUT

# Sentinel Cup Awarded to the Imperial

Harry Bisbee Pilots Winner in the Second Annual Reliability Tour of Wisconsin State Automobile Association—Only 1 Point Penalization on Car—Ford Wins

the Journal Trophy and Franklin the Owners' Class—

Lewis Strang Killed in Accident  
at Richland Springs

MILWAUKEE, WIS., July 25—With but a single point charged against its record, a 1911 model 44 Imperial touring car, driven by Harry Bisbee, of Jackson, Mich., won the second annual reliability contest of the Wisconsin State Automobile Association, taking down the Milwaukee Sentinel sweepstakes trophy for 1 year and the Milwaukee Journal cup for touring cars for permanent possession. The car was entered by the La Crosse Plow Co., of La Crosse, Wis.

The little Ford was close behind the Imperial and with its 2-point penalty won the Milwaukee Evening Wisconsin trophy for roadsters, to be held permanently. The car was driven by William H. Diener and entered by the Hickman-Lauson-Diener Co., state agent.

The Emil Schandain trophy for 1 year's possession by the privately-owned car making the best showing was awarded to J. D. Babcock, whose model D Franklin incurred a penalty of 17 points under the grade III rules governing this division, and a 61-point penalty under the grade I rules governing the trade classes, in which Mr. Babcock also entered and drove his car.

The announcement of the decision of the contest board was not made public until late Tuesday morning, and while no protests are expected, other contestants have until Wednesday noon to file them.

The model R Reo, the only 1912 model in the tour, made an excellent showing, taking second place in the touring car class with only 6 points chalked up against it.

## Dark Horse the Winner

While some of the local dealers are a bit chagrined that an outside car took the chief trophies and won the tour, it is a matter of satisfaction that a Milwaukee-made motor helped the Imperial to head the list. The Imperial Automobile Co., of Jackson, Mich., uses a motor manufactured by the Milwaukee Motor Co., Milwaukee.

The Imperial's 1 point was incurred in the final technical examination, a bolt on the mudpan being found loose. It was at first thought that No. 8 had a radiator leak, but exhaustive tests showed this to be perfect. The car was gone over time and again but no fault could be found and the final penalty was 1 point.

The model T Ford was a close contender with the Imperial No. 8 for first honors.

Diener incurred a penalty of 1 point for a motor stop on the fifth day's run and an additional point was imposed in the technical for a leaky water connection.

August A. Jonas' No. 1 Cadillac, which made a beautiful run on the road and came through the brake, clutch and motor tests clean, being touted as the winner, fell down in the final. Three points were imposed, 1 for leaky water connection and 2 for loose cap screws.

The winning Imperial's teammate, No. 7, stood fourth in the roadster division with 8 points. Herb Crampton lost 6 points in the brake test and 2 in the technical for loose pan bolts.

The Warren-Detroit made one of the

best performances of any car and Rockstead was the only one to come through the final examination with a perfect score. However, he had been assessed 12 points for putting sand on a slipping clutch on the road and 2 points in the brake test.

## Final Results in Tour

The final result and penalizations, regardless of class or division, were as follows:

No.	Name of Car	Driver	Total Penalty
8—Imperial	.....	Harry Bisbee	1
6—Ford	.....	W. H. Diener	2
1—Cadillac	.....	A. A. Jones-Fuhrmann	3
9—Krit	.....	W. G. Westwood	4
5—Reo	.....	A. J. Mareh	6
7—Imperial	.....	Herb Crampton	8
15—Warren-Detroit	.....	R. D. Rockstead	14
12—Overland	.....	R. B. Bates-Jno. Heber	22
10—Case	.....	Will L. Jones	29
2—Buick	.....	Emil Hokanson	31
11—National	.....	Charles Merz	33
13—Franklin	.....	J. D. Babcock	61
3—Buick	.....	Geo. P. Hewitt	63
4—Buick	.....	Nicolazzo-Munson	162
14—Regal	.....	C. H. Delafield	259
16—Petrel	.....	Jesse J. Mack	1,459

In a number of cases, as will be seen from the above, the numbers given to the cars predicted their final standing. No. 11 National finished eleventh and No. 5 Reo finished fifth.

## Good Showing by the Case

Billy Jones' No. 10 Case made a remarkable run, especially under circumstances and conditions. Jones bravely finished the run after the shocking death of his manager and teammate, Lewis Strang, and came in with a perfect road score. He got perfect marks in the brake, motor and clutch tests, but in the final examination 29 points were plastered on his car. About half of this was due to loose spokes and the remainder came as the result of loose bolts, lost nuts, a leaky water connection and a bent starting crank.

The showing of the Buick team was rather disappointing, as Emil Hokanson, who won the Sentinel cup in the first tour in 1910 with a model 19 Buick, was expected to repeat with his model 39 Buick this time. The Madison boy had some hard luck, however, accidentally backing into another car in the excitement following a motor stall just as he was ready to pull out of Neillsville checking station. He left his gear in reverse. He had a perfect road score, but received 9 points in the brake tests and 22 in the finals, 17 points of which were due to the accident at Neillsville.

No. 3 Buick, a roadster, and No. 4 Buick, a five-passenger car, both of the same type, suffered 63 and 162 points

## THE TROPHY WINNERS

### MILWAUKEE SENTINEL TROPHY

No. 8—Imperial.....Harry Bisbee

### MILWAUKEE JOURNAL TROPHY

No. 8—Imperial.....Harry Bisbee

### MILWAUKEE EVENING WISCONSIN TROPHY

No. 6—Ford.....W. H. Diener

### EMIL SCHANDEIN TROPHY

No. 103—Franklin.....J. D. Babcock

### WISCONSIN FINAL RESULTS

### TOURING CAR CLASS

No. 8—Imperial ..... 1 point

No. 5—Reo ..... 6 points

No. 10—Case ..... 29 points

No. 2—Buick ..... 31 points

No. 13—Franklin ..... 61 points

No. 4—Buick ..... 162 points

### ROADSTER AND TOUR TONNEAU DIVISION

No. 6—Ford ..... 2 points

No. 1—Cadillac ..... 3 points

No. 9—Krit ..... 4 points

No. 7—Imperial ..... 8 points

No. 15—Warren-Detroit ..... 14 points

No. 12—Overland ..... 22 points

No. 11—National ..... 33 points

No. 3—Buick ..... 63 points

No. 14—Regal ..... 259 points

No. 16—Petrel withdrew ..... 1,459 points

### PRIVATE OWNERS' DIVISION

No. 103—Franklin ..... 17 points

No. 102—Auburn ..... 1487 points

No. 101—Kisselkar withdr ..... 1646 points

### PERFECT ROAD SCORE CARS

No. 1..... Cadillac

No. 2..... Buick

No. 4..... Buick

No. 5..... Reo

No. 7..... Imperial

No. 8..... Imperial

No. 10..... Case

### FINAL EXAMINATION

No. 15—Warren-Detroit ..... 0

No. 8—Imperial ..... 1

No. 6—Ford ..... 1

No. 5—Reo ..... 2

No. 7—Imperial ..... 2

No. 1—Cadillac ..... 3

No. 9—Krit ..... 3

No. 3—Buick ..... 5

No. 12—Overland ..... 14

No. 13—Franklin ..... 15

No. 2—Buick ..... 22

No. 11—National ..... 23

No. 10—Case ..... 23

No. 14—Regal ..... 39

No. 4—Buick ..... 61

No. 16—Petrel ..... Withdrawn



penalty, respectively. These two cars were entered by the Milwaukee branch of the Buick Motor Co., while Hokanson's came under the name of the Hokanson Automobile Co., of Madison.

As the table shows, the competition was keen and while no perfect scores were recorded, the showing in general is better than on the occasion of the first tour in 1910, when one perfect score was registered, that of Hokanson's Buick. The contest was so close that the technical committee, led by F. E. Edwards, chairman of the A. A. A. technical board, spent three times as many hours over the cars in the final examination as last year, when there were more cars. The committee was up the greater part of the night from Monday until Tuesday and the members took turns in sleeping until the board was ready to make its final announcement of the awards. The final examination report was as follows:

#### ROADSTER CLASS

- No. 6, Ford—Leaky water connection, 1 point.  
 No. 1, Cadillac—Leaky water connection, 1 point; two loose cap screws, 2 points; total, 3 points.  
 No. 9, Krit—Leaky oil connection, 1 point; loose jamb nut, 1 point; water leak, 1 point; total, 3 points.  
 No. 7, Imperial—Two loose pan bolts, 2 points.  
 No. 15, Warren-Detroit—Perfect.  
 No. 12, Overland—Rear wheel spread, 10 points; two lost oil cups, 4 points; total, 14 points.  
 No. 11, National—Two loose fender bolts, 2 points; six loose pan bolts, 6 points; loose steering connection, 15 points; total, 23 points.  
 No. 3, Buick—Crack in gasoline line, 1 point; broken hood fastener, 4 points; total, 5 points.  
 No. 14, Regal—Seven bolts lost, 14 points; loose jamb nut, 1 point; water leak, 1 point; muffler lost, 5 points; two loose hood fasteners, 2 points; muffler bracket broken, 5 points; four loose pan bolts, 4 points; one lost body bolt, 2 points; right front fender broken, 5 points; total, 39 points.  
 No. 16, Petrel—Withdrawn end of third day.

#### TOURING CAR CLASS

- No. 8 Imperial—Loose pan bolt, 1 point.  
 No. 5 Reo—Lost grease plug, 1 point; loose exhaust union, 1 point; total, 2 points.  
 No. 10, Case—Grease cup lost, 2 points; two nuts lost, 4 points; 2 bolts loose, 2 points; three loose spokes, 15 points; leaky water connection, 1 point; bent starting crank, 5 points; total, 29 points.  
 No. 2, Buick—Loose drain cock, 1 point; two loose mud pan bolts, 2 points; loose magneto connection, 1 point; one loose body bolt, 1 point; left rear fender bent, 2 points; two broken spring leaves, 10 points; one broken spring leaf, 5 points; total, 31 points.  
 No. 13, Franklin—One leaf right rear spring broke, 5 points; bending clip left rear spring, 1 point; two pan bolts lost, 4 points; broke band retaining spring loose, 5 points; total, 15 points.  
 No. 4, Buick—Leaky pet cock, 1 point; jamb nut loose, 1 point; three loose apron bolts, 3 points; two loose body bolts, 2 points; leaky radiator, 20 points; loose nut on steering column, 1 point; fender lag screw lost, 2 points; front axle spread, 20 points; right rear spring leaf broken, 5 points; four loose hood bolts in hood strip, 4 points; one lost bolt in hood strip, 2 points; total, 61 points.

#### MILWAUKEE BRAKE TEST

	Service Brake, ft.	Emergency Brake, ft.
No. 1—Cadillac	40	49
No. 2—Buick	52	57
No. 3—Buick	54	85
No. 4—Buick	55	131
No. 5—Reo	54	38
No. 6—Ford	27	39
No. 7—Imperial	56	50
No. 8—Imperial	47	46
No. 9—Krit	33	44
No. 10—Case	40	49
No. 11—National	43	49
No. 12—Overland	35	55
No. 13—Franklin	46	79
No. 14—Regal	11	150
No. 15—Warren-Detroit	45	52
No. 16—Petrel	Withdrawn	

"The tour was a great success," said President M. C. Moore. "Every one of

the entrants and contestants is gratified over the results. One of the most pleasing features is the sportsmanlike attitude taken by those who failed to do as well as they hoped and expected. We are starting arrangements for the third tour next summer at once and you may be sure that this will be even bigger and better."

The annual Wisconsin tours are not mainly run for advertising purposes, as is generally believed. The tour is probably the most potent factor in promoting the improvement of highways that can be invented. While the tradesmen who enter find its greatest value in the publicity their cars receive and the advertising work that they are enabled to do by a jaunt through the state, it is true that the association's idea of making friends of all farmers, which is one way of promoting highway improvement, is of great value to the dealers in the sale of cars. If the results are not immediately apparent, they will come soon.

One fatality occurred on the tour, Lewis Strang, one of America's most prominent racing drivers, being killed on Thursday when his car went over an em-

bankment near Richland Center, caused by the bank crumbling away while Strang's car was motionless, waiting for a horse-drawn vehicle to pass.

#### Death of Lewis Strang

The untimely death of Lewis Putnam Strang, who, although having accomplished remarkable things, was just entering the greatest part of his career, occurred on July 20 on an island in the Wisconsin river, 21 miles south of Richland Center, Wis. It was not a death such as Strang would have wished for. But it was a death such as he laughingly predicted long ago when he said, "I'll never be killed on the track. I'll get mine on the road some day."

Strang, driving a Case car carrying two members of the technical committee of the tour, John W. Tufts and F. L. Clark, with Joe Jagersberger beside him, left LaCrosse 2 hours before the contestants in the run. It was to be his last day in the tour, as he received a wire just before leaving LaCrosse asking him to return to the Case factory at Racine on Friday.

After stopping to pay toll on the bridge



HARRY BISBEE IN IMPERIAL, WINNER OF SENTINEL TROPHY

#### REPORT OF WISCONSIN STATE A. A. RELIABILITY, JULY 17 TO 22, 1911

No.	Name of Car	Model	No. of Passengers	Driver	Road Score	Brakes	Motor	Clutch	Technical	Total
TOURING CAR CLASS										
8	Imperial	44	5	Harry Bisbee	0	0	0	0	1	1
5	Reo	1912 R	5	A. J. March	0	4	0	0	2	6
10	Case	L	5	Will L. Jones	0	0	0	0	29	29
2	Buick	39	5	Emil Hokanson	0	9	0	0	22	31
13	Franklin	D	5	J. D. Babcock	17	29	0	0	15	61
4	Buick	39	5	D. Nicolazzo-M. J. Munson	0	96	5	0	61	162
ROADSTER CLASS										
6	Ford	T	3	W. H. Diener	1	0	0	0	1	2
1	Cadillac	30	4	Aug. Jonas-L. Fuhrmann	0	0	0	0	3	3
9	Krit	A	2	W. G. Westwood	1	0	0	0	2	4
7	Imperial	43	2	Herb. Crampton	0	6	0	0	8	8
15	Warren-Detroit	11 J	2	R. D. Rockstead	12	8	0	0	0	14
12	Overland	53	2	R. B. Bates-John Heber	3	5	0	0	14	22
11	National	"40"	2	Charles Merz	10	0	0	0	23	33
3	Buick	38	2	George P. Hewitt	19	39	0	0	5	63
14	Regal	N	2	C. H. Delafeld-J. Mahone	93	127	0	0	39	259
16	Petrel	"25"	2	Jesse J. Mack	1459	Withdrawn				
PRIVATE OWNER'S DIVISION										
103	Franklin	D	5	J. D. Babcock	17	No tests				
102	Anuburn	N	5	C. Hucksdorf	1487	No tests				
101	Kisselkar	LD 11	2	Mort I. Stevens	1646	Withdrawn				



W. H. DIENER IN FORD, WINNER OF JOURNAL TROPHY

which connects the island with the mainland on the west side, Strang ran about 200 yards on the toll road, which is just wide enough for two teams to pass and has 10 to 15 foot embankments on both sides. A buggy was ahead and seeing he could not pass at once, Strang stopped until the buggy could move over. His back wheels were at least a foot from the edge of the road. Suddenly the roadway began to crumble, and Strang shouted to his passengers to jump. Jagersberger, knowing that his manager's arm was still weak from a recent fracture, jumped to the wheel, but no power under the sun could have held the heavy car on the crumbling road, and it rolled down the embankment. Tufts, Clark and Jagersberger rolled over and over and escaped, but Strang was caught. By almost superhuman effort the three rolled the car from Strang's body. As they did so Strang gave a groan and passed away. The medical examination showed that his skull was fractured at the base, the cheekbone was crushed in and his left leg was broken. The running board struck him squarely across the left side of his face and neck.

#### Jagersberger Wrenches Back

Jagersberger, the last to jump, suffered a wrenched back, and the shock of the accident and his associate's death placed him in a serious condition, making it impossible for him to continue on the tour. He had to be dragged from the side of Strang as the dead pilot lay in a little undertaking parlor at Blue River, a mile from the point of the accident.

The car was not badly damaged. The fenders were bent and lamps broken and a spring was broken. The steering wheel was torn from the column. The rear axle was slightly bent on the right side. In the 3 days previous, Strang broke four springs by fast driving over the country roads of Wisconsin.

It is probable that a damage suit will be started against the company which

owns the toll bridge and road. It was discovered that only 2 months ago a woman driving a horse went over the embankment at the same point and was fatally injured. It has been decided that Strang's injured arm was not a cause of the accident.

#### Only Two Withdrawals

It is considered remarkable that only two cars which started from Milwaukee on July 17 were obliged to withdraw from the running and make a short cut to Milwaukee. The route selected by President Moore was an exceptionally good one—insofar as testing the reliability and durability of cars is concerned. Broken springs or broken spring leaves were the rule rather than the exception. In the 3 days that Lewis Strang drove his Case car, carrying the technical committee, that driver used four springs. Strang, of course, went over the road at higher speed than the contestants, although this was not the cause of his untimely end, and he made his car take the rough roads regardless of bumps, water bars and bad spots. The Kisselkar roadster driven by Mort Stevens in the private owners' division, was obliged to make a short cut to Milwaukee because of broken springs. His radiator was hanging on the front axle and rather than pound his car to pieces, Stevens withdrew. The little Petrel suffered also from the rough going and withdrew at the end of the third day.

After passing through the great Menominee Indian reservation on the second day, the tourists believed there was nothing more to see in the line of scenery. However, when they reached LaCrosse and made the trip through the Mississippi valley bluffs and hills, the beauties of the government reserve were regarded as merely an incident.

#### Wisconsin At Its Best

The entire tour, in fact, was one of beauty and historic interest. While it cannot be said that it compared with the

Munsey in historical interest, being entirely within one state, it nevertheless showed Wisconsin people the state of Wisconsin in its best vein.

Wednesday's run was from Wausau to LaCrosse, a distance of more than 200 miles. Luckily Pathfinder Moore chose only one 200-mile day's run, for it is doubtful if any one of the cars could have made that distance every day of the 6 at the average speed set by the rules. At Stevens Point and Grand Rapids the local motor clubs were out in full force and tendered the tourists a hearty reception. It was early in the morning when these places were reached and business was practically suspended during the time the party stopped. At Marshfield, the newly organized club provided an excellent lunch and cigars. Nine miles out of Neillsville the Overland official pilot car broke down and had to be towed in, the pinion on the drive shaft having been split by the awful pounding the car received. Black River Falls gave the tourists one of the heartiest receptions of any town along the route. At Sparta, the home of Louis T. Hill, banker and capitalist, who is a member of the contest board and the technical committee, every man, woman and child was in the public square to greet the boys in khaki.

One of the interesting sights on the last lap to LaCrosse was the business district of West Salem, which was swept clean by fire only a short time ago. Notwithstanding the calamity, the people showed their interest in the run by hanging out flags, banners and greetings on residences and the remaining business places. At this point the tourists passed the home of Hamlin Garland, the novelist, who was out in shirtsleeves and broad-brimmed straw hat to wave a welcome.

The road from West Salem to LaCrosse, although in the midst of the high hills and bluffs of the Mississippi valley, was one of the finest encountered on the trip. All the way it was smooth, hard macadam, which made the tired tourists burn up the remainder of the day's 203 miles. Despite the long and hard run, but few of the cars were guilty of work and the day's penalty roll was small indeed. However, the final examination showed the effects of the rough going most of the way.

#### Thursday a Hill-Climb

Thursday was one grand hill-climb. It was hill-climb day and when the day's run was over the boys safely ensconced in beds and cots at Lancaster, anyone who mentioned the word hill was thrown from the roof. The association originally intended to have one open day for an association meeting and hill-climb, but the run was too long and every day was spent in actual pounding over the roads. Those who never have been in the hills of western Wisconsin cannot appreciate the terrible racking the cars received on Thursday's run. The distance was only 128.5 miles, but that was plenty. The ordinary hills of Wisconsin pale into insignificance



at these veritable mountains. It was up for miles and down for miles and progress necessarily was slow, for water bars were frequent and both ascent and descent had to be made with extreme care. For 25 miles or more the cars were forced to climb and descend St. Joseph's ridge, which while not the highest point in Wisconsin, requires more effort to negotiate than the much-touted highest point—reached with ridiculous ease by the cars on the following day.

#### Hills Tire Contestants

A 15-minute stop was made at Viroqua, where the new motor club was out in full force with cigars and lunches. It was only 41 miles from LaCrosse, but the tourists were more tired put by the grind over the ridges and hills than if they had gone 100 miles on ordinary highways. There was a 10-minute stop at Viola and Richland Center provided a fine 1½ hour's entertainment, including a dinner by local motoring enthusiasts, members of the Richland Center Automobile Club. It was here that the news of the death of poor Strang was received and it was a blow that struck deep into the hearts of every person in the tour, his associates as well as his merest acquaintance. F. L. Clark, technical committeeman, who rode with Strang, is a resident of Richland Center and immediately telephoned his mother that he was safe, relieving the suspense to some degree.

Shortly after leaving Richland Center the tourists were obliged to pass the spot where Strang met his death. At least 2,000 farmers from the surrounding country were at the place and it was a silent procession that went by and into Blue River, where the body was lying in a little undertaking parlor and the Case car, but little damaged, rested in a barn. There was a 10-minute stop here.

From Blue River to Lancaster, the night control, was 30 miles, but these miles were long ones. The accident cast a damper on spirits and the cars took it easy, drivers and passengers having been deeply affected.

At Lancaster the motor club had made elaborate preparations for the evening, but out of respect for the memory of Strang, the reception included only a band concert and a theater party, to witness the Indianapolis 500-mile race motion pictures. Lancaster was the only small town in which the tour stopped over night and the accommodations were good, taking everything into consideration.

#### Fine Roads the Fifth Day

Some of the finest roads in the state formed the fifth day's run, from Lancaster to Janesville. While the tourists had struck fine spots of road on previous days, it practically was one long stretch of good road all the way on Friday. The roads are of natural dirt and by the time the last car passed were well worn and dusty, but it is certain that farmers will have considerably more pleasure in driving on these roads today than they did before

the cars passed. Instead of ruining roads, as many would have us believe, motor cars actually improve natural dirt roads, as Friday's run proved.

On this day, too, the tourists began to get back into "God's own country" and farmhouses were less than miles apart, adding life to the jaunt. Stops were made at Platteville, Darlington, Mineral Point and Dodgeville, the heart of the lead and zinc mining country of Wisconsin—the Joplins of the north. The tourists covered more than 100 miles in the morning, reaching Madison, the state capital, between 1 and 1:30 o'clock, incidentally negotiating the highest point in Wisconsin—Blue Mounds—and passing the site of the first capital of Wisconsin near Belmont.

The Hokanson Automobile Co. of Madison tendered the party a dinner in the Capital house. This company's Buick, driven by Emil Hokanson, won the Sentinel trophy last year and the members wished to do something handsome for the tourists.

#### From Madison to Janesville

It was a jaunt of pleasure from Madison to Janesville, the night control. This is one of the oldest parts of the state, which fact is proven alone by the condition of the roads. The cities are close together and have been doing fine highway work and the whole stretch was like a boulevard. At Stoughton the motor club held a reception and in Edgerton, the heart of the tobacco country, the commercial club had lunches ready for the hungry tourists. Janesville, 159.6 miles from Lancaster, was reached in fine season. Dr. R. W. Edden, president of the Janesville A. C., who gained a reputation as an entertainer while the Chicago tourists were in that city recently, was master of ceremonies. A band played in the public square all evening and while other forms of entertainment were dispensed with, the mayor told the tourists at the evening's meeting that the key to the city had been thrown into the river and Janesville was theirs.

Homecoming day was Saturday, the run being from Janesville to Milwaukee, 122.7 miles. Excepting for the conservative drivers, who nursed their cars all the way, it was a case of beating it every minute of the time and the first car checked in at the Hotel Pfister at 12:10 p. m., making the 123 miles in 5 hours 10 minutes. Fast time was made possible by the excellence of the roads. The last day's run was through a densely populated section of the state and there were evidences of a get-together spirit among those responsible for the improvement of highways. Stops were made at Delavan, the home of the state school for the deaf; Elkhorn, where the greatest county fair in the world is held annually, and Burlington. Kenosha, the home of the Rambler, and Racine, where the Case, Mitchell and other cars are made, had planned elaborate receptions, which were dispensed with. The party had a good view of the immense Rambler plant. Upon reaching Racine the tourists were met by a party of officials of the Case company, who thanked the contestants for their courtesies and kindness in the matter of Strang's death. The Case company planned to give a dinner, but of course dropped these arrangements.

The cars reached Milwaukee in a bunch and by 2 o'clock all of the contestants were at Fourth and Cedar streets to take the final tests preparatory to being taken into the Auditorium for the final examination by the technical committee.

#### Cadillac Files a Protest

Milwaukee, Wis., July 26.—Special telegram—The entrants of the Cadillac have protested the findings of the technical committee in the Wisconsin state tour. The car was penalized 3 points by the committee. The Cadillac was first said to have a perfect score and was released by the committee. Then F. E. Edwards, chairman of the A. A. A. technical committee, appeared and the car was recalled. On the second examination Edwards assessed the car 3 points. Now a protest has been filed by the entrants of the car.



J. D. BABCOCK, FRANKLIN, WINNER OF SCHANDEIN TROPHY

# Fourteen Perfect in Ohio Reliability

Maxwell, Velie, Oakland, Firestone-Columbus, Buick, Regal, Marmon, Everitt, Krit, Lion, Norwalk, Ford and Reo Survive Test of Cleveland News—Contest of the Grade 3 Variety

CLEVELAND, O., July 22—The awards made in the Cleveland News reliability run, made here Saturday morning, show that fourteen of the twenty-eight cars went through the long test over the hills and rough highways of southeastern Ohio with perfect scores.

There is much in the scores of the cars, which did not get the perfect mark of 1,000, over which the owners may be congratulated. The contest did more than any similar run in this locality has done to

and it was necessary to use every gear in the cars. For diversity of road conditions the run in general has been characterized by everyone who has been on other reliability runs as the equal of anything ever held.

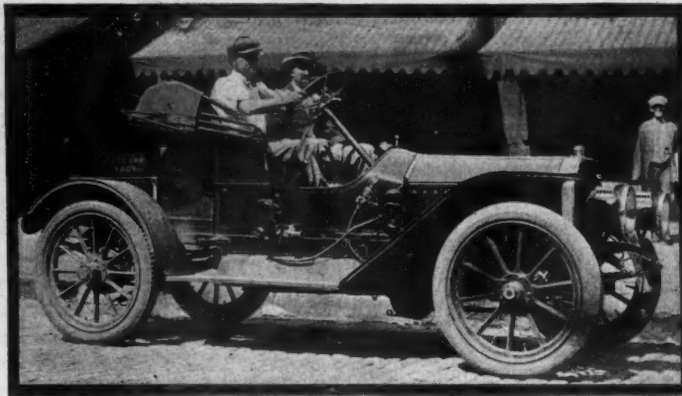
The thousands of farmers who watched the cars pass from every corner in the 500 miles are still talking about the contest, according to reports received. To many of them it was a revelation to see car after car tear through the ruts, sand and gravel.

Despite the hard roads that were traveled the majority of the drivers were sorry to check in at Rocky River Wednesday night. Another week or two of the same sort of life would have pleased them immensely.

The success of the run was in large measure due to the enthusiasm and earnestness of the officials.

## RACING AT GUTTENBERG

New York, July 25—There were no thrills about the racing at Guttenberg Saturday, the program failing to develop anything spectacular. But on the other hand there was nothing that savored of mishap during the afternoon's sport and the big crowd saw the 10-mile record of



TWO OF THE CARS IN THE CLEVELAND RUN—THE PERFECT SCORE LION AND PEERLESS, WINNER OF ITS CLASS

demonstrate the reliability of the motor car. The run was a grade 3 event, with no final examination and penalties for time and work only. A small number of cars in the run came through without tire trouble of any sort. The large majority of the observers' cars, however, showed that the drivers in the run had tire trouble lasting from 2 minutes to hours.

John Rauch, who drove a Krit car, stands as the champion tire puncturer. He had thirty-eight punctures in a ride of 533 miles. The first day out he had seventeen. His colleague, H. Higginbotham, also driving a Krit, had thirty-seven punctures.

The cars withstood a strain and pounding that made them appear to be indestructible mechanical monsters. Fourteen, more than one-third of the starters, came through without any engine trouble of any sort. To anyone who is familiar with the roads leading from Wheeling to Zanesville over mountains and hillsides, raised every 2 rods by water breakers a foot and a half high, this will appear as a remarkable feat. The cars climbed one hill, the St. Clairsville grade, a mile and a half long, just as they left Wheeling, and then for 78 miles they went up and down nearly fifty hillsides. This feat made the News run distinctive in the contests that have been held in this section.

There was every sort of road condition

## CLEVELAND RUN RESULTS

No. and car—	Penalties	Final score
2—Maxwell .....	0	1000
3—Velle .....	0	1000
6—Oakland .....	0	1000
*10—Firestone-Columbus .....	0	1000
12—Buick .....	0	1000
15—Regal .....	0	1000
16—Marmon .....	0	1000
21—Oakland .....	0	1000
22—Everitt .....	0	1000
27—Krit .....	0	1000
*28—Lion .....	0	1000
29—Norwalk .....	0	1000
31—Ford .....	0	1000
37—Reo .....	0	1000
4—Velle .....	2	998
9—Brush .....	2	998
34—Mitchell .....	3	997
38—Maxwell .....	3	997
13—Jackson .....	6	994
†20—Bergdoll .....	12	988
26—Cartercar .....	12	988
19—Peerless .....	15	985
14—Regal .....	17	983
32—Ford .....	120	880
†17—De Tamble .....	663	337
1—Columbia .....	1000	0
8—Krit .....	1000	0
30—Norwalk .....	1000	0

\*Trophy award in suspense pending settlement of question as to stock car registration with the American Automobile Association.

†Proceeded from Wheeling as non-contestants, owing to protest of the American Automobile Association for lack of stock car registration number, but observed all the rules and regulations of the contest.

Penalizations were as follows: No. 1 Columbia, broken spring; withdrawn at Wheeling. No. 4 Velle, replacing crank; No. 8 Krit, tire trouble; withdrawn at Wheeling. No. 9 Brush, work on spark plugs; No. 13 Jackson, cleaning spark plug and tightening clutch; No. 14 Regal, adjusting carburetor and taking on water; No. 17 De Tamble, work on gears and transmission; No. 19 Peerless, work on steering gear, ignition and fan; No. 20 Bergdoll, repairing spring; No. 26 Cartercar, 12-minute engine stop; No. 30 Norwalk, stripped gear; withdrawn at Wheeling. No. 32 Ford, broken fan blade and radiator leak; No. 34 Mitchell, taking on water out of control; No. 38 Maxwell, repairing wiring on cutout.

the track lowered in two successive races. A 50-horsepower Simplex was the medium, and after setting the new mark for the distance at 10:43% in its class race, it knocked off over 12 seconds from that time in the free-for-all, placing the new track mark at 10:31%, which will not be disturbed for some time in all probability. There were five events carded and a match race was added. Summary:

Five miles, class E, under 231 inches—Tower, E-M-F, won; Craig, Paige-Detroit, second; Ferguson, Lancia, third; Gastieges, Overland, did not finish. Time, 5:47%.

Five miles, class E, under 301 inches—Tower, E-M-F, won; Burke, Pullman, second; Craig, Paige-Detroit, third. Time, 5:38%. Gilliam, Correja, Du Closne, Staver-Chicago, Ferguson, Lancia and de Palma, Mercer, also started.

Five miles match race—Du Closne, Staver-Chicago, defeated Gilliam, Correja. Time, 6:40%.

Ten miles, class E, under 451 inches—Limberg, National, won; Rouse, Marmon, second; de Palma, Mercer, third. Time, 11:13%. Burke, Pullman, Cobe, Jackson and Menges, E-M-F, also started.

Ten miles, class E, under 601 inches—De Palma, Simplex, won; Limberg, National, second; Rouse, Marmon, third. Cobe, Jackson, did not finish. Time, 10:43%.

Ten miles, free-for-all—De Palma, Simplex, won; Limberg, National, second; Rouse, Marmon, third. Time, 10:31%. Burke, Pullman, and Du Closne, Staver-Chicago, also started.

## SPRINGFIELD WILL HAVE MEET

Springfield, Ill., July 25—The state board of agriculture has signed contracts for the appearance of Ray Harroun and Bob Burman on the last day of the state fair, October 7, when a motor card will be run off.



# Gossip of Motor Industry in Detroit

**D**ETROIT, Mich., July 24—The announcement is made by General Motors Co. that the plants of the Marquette Motor Co., of Saginaw, and of the Welch-Detroit Co., of Detroit, are to be combined into one manufacturing organization at Saginaw, and will be operated under the name of the Marquette Motor Co. Both of these plants were included in the merger when the General Motors Co. was formed several years ago.

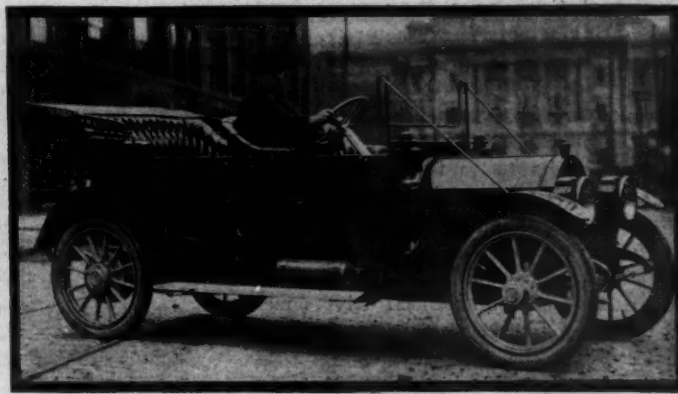
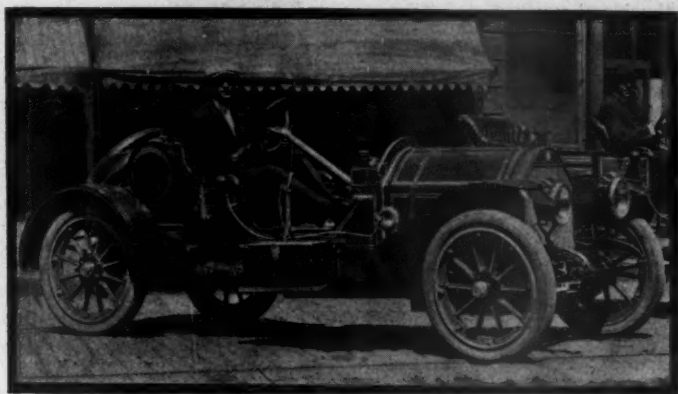
The Marquette Motor Co. has been manufacturing the Rainier car, and the Welch-Detroit Co. the Welch-Detroit car. In merging the two plants, it is the intention to retire both the names Rainier and Welch, and the new car to be known as

## Announcement Made That Plants of the Marquette Motor Co. and the Welch-Detroit Co., Are To Be Combined With One Manufacturing Organization at Saginaw—Market for Used Cars

the dealers by the factory organization. President Warren presided.

The Seitz Automobile and Transmission Co. is now engaged in the installation of new machinery in its plant at Wyandotte. The building is of two stories, 320 by 60 feet in size and modern construction throughout. The company also has its old Detroit plant still in operation, as well as a foundry at Monroe, the output of which it controls. At present the company is producing an average of a truck a day

way back to the factory or else to some of the dealers in used cars situated in larger cities. This year a noteworthy change has made an appearance. Several of the larger distributors have established used-car departments under competent management. The new local branch of the United Motors has a separate salesroom for used cars. Several garages have added showrooms where used cars are displayed for sale. One of the largest, best-located and most elaborately equipped of the new



VELIE AND MARMON, PERFECT SCORE CARS IN CLEVELAND RELIABILITY

the Marquette will be made in two models, the higher priced one including the Rainier characteristics and the other the Welch's. These general models will comprise the usual line of runabouts, touring cars, etc., with two, three, four, five and seven-passenger capacities, but there will be only the two prices.

A. B. C. Hardy, who has been in charge of the Welch factory in Detroit, will assume the managership of the Marquette Motor Co. plant, and will remove to Saginaw, taking with him a number of his lieutenants, who have assisted him in the production of the Welch-Detroit. This force will be supplemented by specialists in the Marquette plant. The sales department of the Marquette company will remain at 1302 Jefferson avenue, Detroit, in charge of O. C. Hutchinson. A complete service department will be maintained at this address, in connection with a factory branch for the exhibition and sale of the complete line of cars. It is expected that some of the new cars will be ready during the early part of October.

### Warren Entertains Dealers

The latest gathering of dealers has taken place at the Warren Motor Car Co.'s factory. Through the greater part of the past week Warren dealers from all over the country have been in attendance. As usual, the climax came at a banquet, given

from its Detroit plant. This will be greatly increased as soon as the Wyandotte plant is occupied.

J. A. Thorson, for some time advertising manager of the Brush Runabout Co., has left that firm to assume similar duties with the Lion Motor Car Co. of Adrian. Ground has been broken for the new million-dollar factory of the Continental Motor Mfg. Co. adjacent to the Hudson factory on Jefferson avenue, Fairview.

The approach of the usual relaxation of activity is noted at the local factories. Aside from those already engaged in the production of the 1912 cars, the local factories are, general speaking, engaged in clearing the decks for the change to new models and in the taking of inventory and the installation of new machinery. The rush of the busiest part of the season is now over and the period of transition finds but few of the plants running at top speed. To a certain extent this is also the case with the retailers, many of whom are now awaiting their new models. A feature of the retail trade this year has been the notable increase in the business done in used cars.

In former years, Detroit has been a very poor market for used cars. Few of the retailers cared to bother with the disposal of any car which they might find on their hands, and usually such cars found their

garages in the city—that of the Gillespie Automobile Co.—is devoted entirely to the sale and repair of used cars. The showroom occupies one of the finest Woodward avenue corners. Its interior is full of used cars of all types and the firm is said to be doing an excellent business.

### REVIVING THE GLIDDEN

New York, July 25—The entry by the United States Motor Co. of three Maxwell 1912 stock models confirms the view which originally prompted the postponement of the tour to a fall date in order to render available the 1912 models of the various makers. Many manufacturers now are registering their 1912 models, and the 1911 Glidden tour will afford an opportunity for their demonstration.

As previously announced, manufacturers may make their declarations for the tour up to August 1. The following entries have been received: 1911 Cunningham model H, pacemaker; 1911 Oakland model M, 1911 Ohio model 40, 1911 Abbott-Detroit model B-11, three cars, 1911 Washington model D-40, 1911 McIntyre model M-6, 1912 Maxwell, three cars.

It is proposed to hold the tour from Washington to Ottawa some time in September, the exact date to be announced on August 1, provided the minimum of thirty entries are received.

# Hoosiers Finish Tour in Four States

Demonstration Trip of Indiana Motor Car Manufacturers Proves Success from a Business Viewpoint—No Accident Mar Journey—Travelers Given Warm Welcome at Home

INDIANAPOLIS, Ind., July 24—Convinced that the trip has accomplished much in the way of advertising Hoosier-made cars, the participants in the Indiana four states tour reached this city at 2:30 o'clock this afternoon, after a trip 1,431.9 miles in length. There were no accidents of note during the entire trip, and the tour was a success from every standpoint.

The tour was original with the manufacturers of the state. It was purely a social and advertising event, there being no endurance or competitive features. Entrants were limited to cars manufactured in Indiana, and there were twenty-nine cars, representing twenty manufacturers, when the start was made on July 12. All but two cars finished, one of the machines failing to finish being an Ideal truck.

It had been the intention of a number of local drivers to go to Lebanon today and escort the tourists home. During the morning word was received that the tourists would arrive sooner than expected, and the Lebanon plans were abandoned. However, a large number of local drivers met the tourists at Emrichsville, just west of the city. At the head was a big Mais truck, carrying the band composed of employees of the plant of the Maxwell-Briscoe Motor Co. at Newcastle.

The homecoming reception was arranged by Fred I. Willis, president of the Indianapolis Automobile Trade Association, and Frank L. Moore, secretary of the association, assisted by Harry Archey, of the Archey-Atkins Co.; Charles A. Bookwalter, former mayor, and several friends, met the party at Lafayette.

On August 5, those who participated in the tour will be entertained by Frank E. Smith, superintendent of the Maxwell factory at Newcastle, in Nip and Tuck park in that city. There is to be a big chicken dinner and a variety of amusements. Mr. Smith was general chairman of the tour and P. P. Willis, advertising manager of the Mais Motor Truck Co., was general secretary.

The last day's trip was from Logansport to this city, the home start being made at 7 o'clock this morning. Yesterday the party went from Chicago to Logansport, encountering light rains, the first bad weather of the entire trip.

One of the remarkable features was the showing made by the Mais and Whitesides trucks. These cars made the entire run, arriving in this city in fine shape. Each carried a heavy load, but made good time. One of the participants in the tour was a Waverley electric roadster.

At 12:55 o'clock this afternoon the cars were stopped and the occupants remained

with bare heads for 5 minutes, out of respect to the memory of Lewis Strang, whose funeral took place in New York at 1 o'clock.

Leaving this city on July 12, the route was through Illinois, Iowa, Missouri and Indiana, the first Sunday being spent in St. Louis. Throughout the trip the motorists were accorded an enthusiastic reception and about one ton of literature describing Indiana-made cars was distributed.

## CADETS REACH WASHINGTON

Washington, D. C., July 22—The detachment of cadets from the Northwestern Military Academy, of Chicago, who arrived in Washington Monday night, left yesterday for Annapolis, where they will inspect the naval academy before resuming their journey to the military academy at West Point, N. Y.

The unique expedition, which is made up of thirteen cadets under command of Major R. P. Davidson, and four Cadillac cars equipped with wireless telegraph outfits and rapid-fire guns, attracted much attention from war department officials in Washington. The squad went through many maneuvers at the army aviation grounds, 10 miles outside of the city, and theoretically destroyed a number of airships.

President Taft received the cadets just before their departure from Washington and inspected their equipment with the greatest interest.

## GOVERNOR GOES PATHFINDING

St. Louis, Mo., July 26—Eighteen motor cars, occupied by fifty good roads enthusiasts, headed by Governor Hadley, departed from the headquarters of the Automobile Club of St. Louis at 8:30 o'clock yesterday morning to select a state highway across Missouri from three proposed routes.

The St. Louis party met an organization of Kansas Cityans at Moberly at noon today, and they made the run to Jefferson City together. When the St. Louis party left it was generally understood that the northern route will be selected, unless the residents along the other two are able to advance more reasons than they have so far in favor of their own particular roads. This route will lead through St. Charles, St. Peters, New Florence, Montgomery City, Warrenton, Mexico, Moberly, Glasgow, Marshall, Independence and into Kansas City. It is 320 miles in length.

The St. Louis party was headed by a pilot car bearing the official pilot, Roy F. Britton, president of the Automobile Club of St. Louis. Governor Hadley's car was second in line. Besides the governor and



ELGIN GOLD MEDAL TO BE PRESENTED TO LOZIER COMPANY

his staff and several state officials, members of the club and a number of newspaper men are making the trip. Each car bore a white banner, inscribed "State Highway Tour." Cities and towns all along the route are sending out reception committees in motor cars to meet the highway selectors.

## TOURING CLUB EXPEDITION STARTS

Culpeper, Va., July 25—Special telegram—Followed by the good wishes of Vice-President Sherman, three motor cars containing good roads boosters left Washington yesterday en route to Richmond. F. H. Elliott, secretary of the Touring Club of America, and Henry McNair are in charge of the party, which consists of government and state road officials. The object of the trip is to pick out a good road south from Washington to Richmond, over which a large number of motorists who are expected to attend the good roads congress in Richmond in October will travel. That Virginia is alive to the good roads movement was manifested to the tourists in no uncertain manner. Enthusiastic greetings were extended them all along the line and the trip is bound to give the movement a big impetus. Scenically, Virginia is ideal, but its roads leave much to be desired. With a good system of roads, it would prove a great touring ground. The present trip will do much to advance the cause. Vice-President Sherman gave the signal which started the tour and expressed his great interest in the work of the touring club.

## FORD FASTEST AT SEATTLE

Seattle, Wash., July 17—Dashing up the steep Taylor avenue and East Queen Anne hill, over a course  $\frac{7}{8}$  mile long, the Ford, driven by R. P. Rice, won event No. 1 of the Potlatch hill-climbing contest in 1:03 $\frac{3}{4}$ , which was the fastest time made during the meet. More than twenty machines were entered in the five events and



the free-for-all. A feature of the contest was the winning of first place in event No. 5, and also in the free-for-all by the Stearns car, owned by F. J. McHugh and driven by A. C. Stevens. His time in both climbs was 1:04 flat.

The course over which the cars ran was straightaway for about a third of the distance. This portion is planked to Prospect street, beyond which the cars had a brick pavement to run over. Also East Queen Anne drive is a succession of one curve after another to the finish, with car tracks in the center. The racers cut some close corners in negotiating the curves, and the crowd of sightseers got plenty of thrills. Summary:

\$1000 AND UNDER		
Car	Driver	Time
Ford	R. P. Rice	1:03%
Oakland	Archie Kincaid	1:07%
Buick	L. Thirkelsen, Jr.	1:21%
Ford	E. C. Smith	1:22%
\$1000 TO \$1500		
Everett	H. E. Kirby	1:09%
Buick	G. H. Wallace	1:15%
E-M-F	E. B. Staley	1:21%
Mitchell	F. S. Fowle	1:23%
Mitchell	A. Stengel	1:42%
\$1500 TO \$2000		
Buick	J. A. Kess	1:08 7-10
White	R. L. Gardner	1:18
\$2000 TO \$3000		
Stoddard-Dayton	W. L. Gilmore	1:05%
National	R. S. Wilson	1:07
Stoddard-Dayton	W. Stoderus	1:10
\$3000 AND OVER		
Stearns	A. C. Stevens	1:04
Packard	H. C. Berg	1:06%
Lozier	H. W. Smith	1:09%
American	P. A. Blakeley	1:21
FREE-FOR-ALL		
Stearns	A. C. Stevens	1:04
Stoddard-Dayton	L. W. Gilmore	1:05
Ford	R. P. Rice	1:06%
Packard	H. C. Berg	1:06%
E-M-F-Studebaker	E. B. Staley	1:08
Everitt	H. E. Kirby	1:08%
Oakland	A. Kincaid	1:09
National	R. S. Wilson	1:09
Stoddard-Dayton	W. S. Stoderus	1:09%
Lozier	H. W. Smith	1:11
Buick	J. A. Hess	1:12%
Buick	G. A. Wallace	1:18
White	R. L. Gardner	1:18
American	P. A. Blakeley	1:21
Buick	L. Thirkelsen	1:22%
Mitchell	F. S. Fowle	1:23%
Ford	E. C. Smith	1:25

#### A. A. A. SUSPENSIONS

New York, July 25—At a meeting of the contest board held Tuesday the following action was taken:

For participation in the unsanctioned races held July 4 at the county fair grounds track, York, Pa., the following

## New York Fire Chief To Oust Horses

### Movement on Foot To Install Motor Apparatus Altogether—Fund of \$800,000 Available for Purpose and 150 Machines Are Expected To Be in Use in Manhattan by Next March

NEW YORK, July 25—A movement now is on foot in New York city to replace the entire horse-drawn fire-fighting apparatus of Manhattan island by motor-driven vehicles. Fire Commissioner Johnson has appointed a special board to take charge of the purchase of the machine, and with a fund of \$800,000 available, it is prophesied that 150 machines will be in actual service by March 1, 1912. In a general way, it has been decided that the first order will be composed of twenty-five engines, fifty or sixty hose wagons and sixty or seventy trucks. Twenty-nine motor vehicles have been in use in the New York

fire department for some time; these comprising four hose wagons, one engine, one water tower, nineteen roadsters or runabouts and four delivery trucks. The tests to which these experimental machines have been put has proved absolutely that they are far superior to the horse-drawn vehicles. The board chosen to affect the purchases of the new equipment is composed of Deputy Fire Commissioner Phillip P. Farley, Acting Chief John Kenlon, Battalion Chief Howe and Captain Charles S. Demarest, who is in charge of the department's repair department. This board is now considering the matter.

were disqualified and suspended until January 1, 1912: York Garage and Supply Co., J. P. Oden Auto Co., W. P. Norris, J. W. Rickey, J. Y. Burgard, N. F. Hench, W. F. Grove, E. T. Gilliard, H. R. Gallatin, C. Summers, R. Little, Rob Yeager, J. P. Oden, H. Heiges, R. P. Anderson, C. Lambright, Thomas Wilkie, H. P. Hardesty, official starter; York Automobile Association, promoter. County fair grounds track was disqualified and rendered ineligible for license.

For incompetent and careless driving at Brighton Beach, July 3, 1911, Leonard D. Ormsby was suspended and disqualified and his driver's registration card, No. 278, was revoked.

For incompetent driving at Brighton Beach, July 3, 1911, Otto F. Rost and H. D. Fisher were suspended and disqualified until January 1, 1912, and their drivers' registration cards, Nos. 695 and 518, were revoked.

The formal applications for reinstatement of E. H. Betchel, Harry Buckley and William Carlson, all of Los Angeles, who were suspended and disqualified on December 21, 1910, until January 1, 1912, for participation in the unsanctioned meeting at

Ascot Park track, Los Angeles, on December 11, 1910, and whose disqualifications were on June 28, 1911, suspended, were formally reinstated to good standing.

Bert Smith and Chester Lawrence, of Los Angeles, who were suspended and disqualified on March 8, 1911, for participation in the unsanctioned meeting at the Ascot Park track on January 7 and 8, 1911, until January 1, 1912, and whose disqualifications were suspended on April 7 last, were reinstated to good standing.

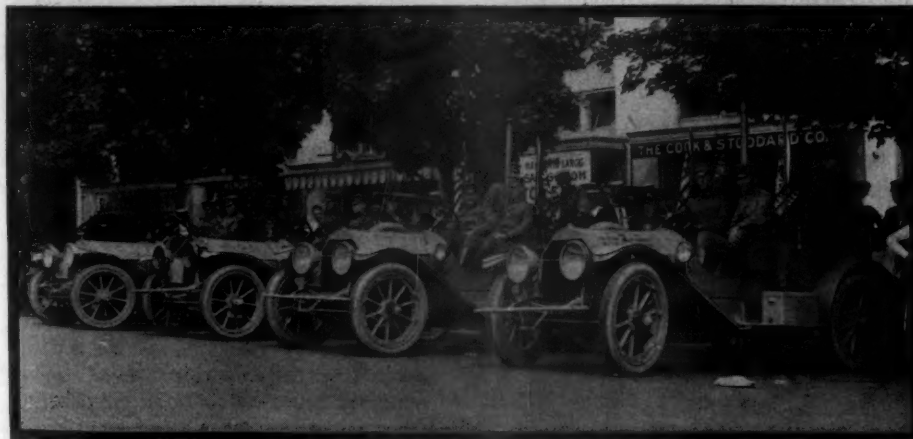
The applications for reinstatement of Leslie Henry and J. Alexander Sloan, who were connected with the unsanctioned meet of December 11, 1910, and who were disqualified until January 1, 1912, were considered but no action was taken.

The application for reinstatement of George H. Clark, who drove in the unsanctioned meet of December 11 under the alias or assumed name of "E. Z. Martin," and who was for this offense suspended and disqualified for 2 years until January 1, 1913, was considered and the board declined to reinstate him.

#### ELGIN RACE PROSPECTS

Chicago, July 25—While no new entries have been received this week for the American Automobile Association's national stock chassis road races at Elgin on August 25-26, there are enough prospects in sight to make it certain large fields will start in all four events. Hanging fire now are the Knox, Pope-Hartford, Palmer & Singer, Simplex, Mercer, Crow-Elkhart, Mercer, Ford and Abbott-Detroit, most of which ought to come in soon.

The Elgin Watch Co. has prepared a \$500 gold medal, commemorative of Mulford's victory last year, which will be presented to the Lozier company when it turns over the trophy to the Chicago Motor Club next week. It is the intention of the Elgin Watch Co. to present a similar medal to the winner each year.



CHICAGO CADETS AND THEIR CADILLACS AT WASHINGTON



# Routes and Touring

## RICHMOND, IND., TO WASHINGTON

**W**ABASH, Ind.—Editor Motor Age—Through the Routes and Touring Information Department will Motor Age outline a route from Richmond, Ind., to Washington, D. C.—John Kaiser.

A trip of approximately 608 miles from Richmond to Washington, D. C., according to the 1911 Blue Books, and one which would probably not take more than 3 days, or 4 at the most, is through Eaton, Johnsville, New Lebanon, Kingsville, Dayton, Harshman, Fairfield and Enon to Springfield, where you strike the old national highway and will find mostly excellent gravel pike roads following through Harmony, Vienna, Brighton, Somerford, Lafayette, W. Jefferson, Alton and Columbus.

Here you have an option of two routes, one continuing on the national highway through Reynoldsville, Etna, Hebron,

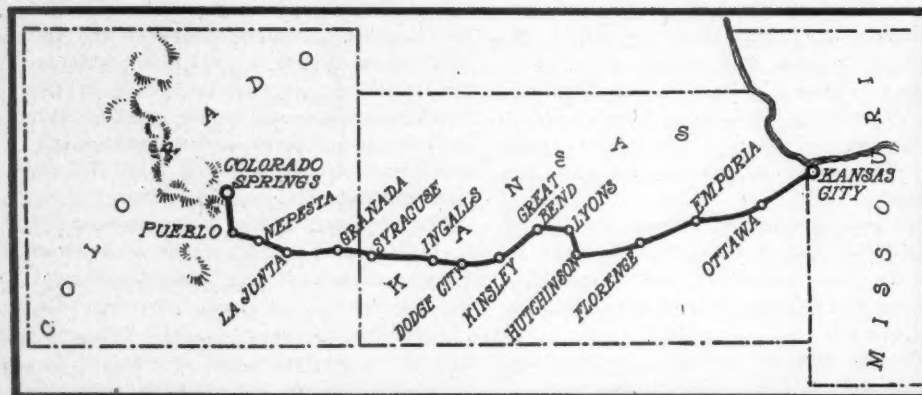
Grantsville, Frostburg, Eckhart, Cumberland, Flint Stone, Hancock, Clear Spring, Hagerstown, Funkstown, Benevola, Boonsboro, Middletown; Braddock, Frederick, Urbana, Hyattstown, Clarksburg, Gaithersburg, Rockville, Dupont Circle, to Washington, D. C.

If you desire to make a 7 or an 8-day trip covering approximately 828 miles you may go to Pittsburg from Wheeling, W. Va., touring through West Alexander, Claysville, Washington, Houston, Canonsburg, Bridgeville, Carnegie and crossing the Monongahela river, enter Pittsburg by the Point bridge. The 1908 Glidden tour is a good one to follow from here to Philadelphia and it passes through Wilkinsburg, Murrysburg, Export, Delmont, Five Points, New Alexandria, Blairsville, Little Washington, Armagh, Cramer, Coopersdale, Johnston, Geistown, Windber, Rummel P.

of either worn pike, fair country road or patches of macadam. From Wilkinsburg to Johnstown is clay and stone road, quite rough and narrow at times, with an occasional stiff hill; then fairly good pike from Cramer to Johnstown is encountered; after that the roads to Bedford gradually become better, with the exception of crossing the mountains between Rummel P. O. and Pleasantville.

There are only fair country roads, up and down hills and mountains, between Bedford Springs and Fort Loudon; between Fort Loudon and Stoughtown there is practically all fine macadam, and on to Harrisburg you will find good hard bottom with spots of neglected macadam road interspersed. In spite of innumerable water breaks and a little clay between Reading and Philadelphia, the run from Harrisburg to Philadelphia is a very good one, there being macadamized roadway practically the entire distance. Philadelphia to Baltimore will also present macadam roads practically the entire 171 miles.

The light line in the map on page 29 of this issue shows how you can return to Dayton by a rather roundabout route through New York, Albany, Buffalo, Cleveland, Chicago, and Indianapolis, making a circle tour of your trip.



ROUTE FROM KANSAS CITY TO COLORADO SPRINGS, TAKING IN HUTCHINSON, KAN.

Jackson, Linnville, Brownsville, Gratiot, Hopewell and Mt. Sterling to Zanesville, or the other which is 5 miles longer but over fine macadam, good dirt and gravel roads via Newark through Granville, Newark, Hanover, Nashport and Irville to Zanesville. Still keeping to the National Highway, taking in Cambridge and Wheeling, pass through Bridgeville, Norwich, New Concord, Cambridge, Washington, Elizabethtown, Fairview, Hendrysburg, Morristown, Lloydsville, St. Clairsville, Bridgeport, Wheeling, West Alexander, Claysville and Washington.

Between Cambridge and Wheeling there is a toll road most of the way, beyond that point you will encounter a hilly road with many turns, patches of macadam; but most of the way either fair country road or worn pike. This is not a good road for rainy weather, but good time can usually be made in settled weather. From Washington traveling towards the coast go through Beallsville, Brownsville, Uniontown, Somerfield, Petersburg, Keyser's Ridge—an elevation of 2,328 feet and the highest point of the national pike—

O., Felix P. O., Pleasantville, Spring Meadow, Bedford Springs, Mount Dallas, Breezewood, Reamers, Harrisonville, McConnellsburg, Fort Loudon, St. Thomas, Chambersburg, Shippensburg, Stoughtown, Mount Rock, Carlisle, New Kingston, Camphill, Harrisburg, Steelton, Middletown, Elizabethtown, Rheems, Mt. Joy, Marietta, Silver Springs, Rohrertown, Lancaster, Oregon, Ephrata, Adamstown, Shillington, Reading, Naumstown, Douglasville, Pottstown, Limerick, Collegeville, Jeffersonville, Norristown and Philadelphia. There is a section of the 1907 Glidden tour from Philadelphia to Baltimore which takes in Wayne, Malvern, Whitford, Caln, Coatsville, Black Horse, Williamsstown, Paradise, Lancaster, Mountville, Columbia, York, Abbotstown, Hanover, Littlestown, Silver Run, Westminster, Carlton, Reistertown, Owingmills and Baltimore. The Automobile Blue Book gives the balance of the way as Laurel, Hyattsville, Bladensburg, Staton Square and Washington, D. C.

The 62 miles from Wheeling to Pittsburg is over a hilly road with many turns

## CLAREMORE TO COLORADO SPRINGS

Collinsville, Okla.—Editor Motor Age—Through the Readers' Clearing House will Motor Age outline the most practicable route from Claremore or Collinsville, Okla., to Colorado Springs and Denver, Colo.—C. L. Goodale.

Leaving Claremore follow the St. L. I. Mt. and Southern Railroad to Coffeyville, Kans., thence to Independence, Fredonia, Fall River, New Albany, Climax, Eureka, Eldorado, Towanda, Benton, Greenwich, Wichita. From Wichita to through Maize, Colwich, Mount Hope, Haven, Yoder, Elmer to Hutchinson where you strike the new Santa Fe trail which passes through Lyons, Great Bend, Kinsley, Ingalls, Syracuse, Granda, La Junta, Nepesta, Pueblo, Colorado Springs, Pring, Palmer Lake, Perry Park, Sedalia, Littleton, Denver.

## NASHVILLE TO HOT SPRINGS

Hot Springs, Ark.—Editor Motor Age—Can Motor Age tell me where I can obtain the information as to the best and most direct route from Hot Springs to Nashville, Tenn. I have been furnished with a route but it is not very direct, it being by way of Tusculumbia, Ala., thence to Nashville. I would think there would be a nearer route.—Robert G. Davis.

A Motor Age representative went over this entire route last year, but by the way of Nashville, Columbia, Summertown,



# Information



Lawrenceburg, Sheffield, Tuscumbia, and thence to Corinth, Middletown, Moscow, Memphis. From Memphis the route went down the side of the Mississippi river and crossed over by special ferry to Helena. From Helena it went direct to Clarendon and the White River where the tourists were again ferried by special arrangements, and went thence by way of Little Rock, Benton to Hot Springs.

This route has several almost impassable stretches and is roundabout. For example, the road from Nashville to Columbia is perfect, but shortly after leaving Columbia rough roads are encountered and you will have to ford many creeks until Florence is reached. From Florence to Sheffield the road is good. Leaving Sheffield you have a terribly bad road to Corinth, some of the worst roads in the South. From Corinth to Memphis the road is satisfactory.

The road is good but a little rough from Memphis down the river to opposite Helena. From Helena to Clarendon are good roads, and from Clarendon to Little Rock excellent roads all the way. From Little Rock to Hot Springs, generally speaking, there is a good road; there is considerable mountain work for 30 miles or more but nothing to give any trouble at all. This is a roundabout road but we do not know of any other.

It may be that you can go from Nashville to Columbia, Summertown and then across to Memphis by way of Hohenwald, Linden, Perryville, Lexington, Brownsville and Stanton. Motor Age does not know anything of this road whatever. We do not believe there is any shorter route between Hot Springs and Nashville than via Helena and Tuscumbia.

In making such a trip you will have to arrange for having your car ferried across the Mississippi at Helena, and also across the White river at Clarendon.

## MINOT, N. D., TO PACIFIC COAST

Glenburn, N. D.—Editor Motor Age.—Will Motor Age kindly give me through the routes and touring information department the best route from Minot, N. D., to Portland, Ore., by way of Spokane, Wash., showing at what points I would have the best passes through the mountains?—Tourist.

A kindly disposed motorist gives the following route to Miles City, Mont. Minot to Bismark takes you through Velva and Turtle Lake, where you will be obliged to get posted for the road east of Washburn to Canfield, thence south from Canfield to a point on the main traveled road six miles east of Bismark. From Bismark to Miles City, Mont., will take you through the following towns: Man-

dan, New Salem, Glenullen, Hebron, Richardton, Taylor, Dickinson, Belfield, Medora, Sentinel Butte, Beach, Wibaux, Glendive, Terry and Powder River Bridge to Miles City.

Leaving Miles City keep on the north side of the Yellowstone river following the traveled road to Forsythe; follow the old Custer trail to Custer, cross the river to the south side, going over Bull mountain to Pompey's Pillar; cross to the north side of the river at Huntley, going through Huntley, thence Billings.

Leave Billings on the south side of the Northern Pacific railroad tracks, going through the towns of Laurel, Park City, Columbus and Merrill; then follow the old trail from Merrill through Dead Man's Canyon to Big Timber; straight west on the south side of the Northern Pacific tracks to Springdale; continue on the south side of the railroad to Livingston.

If you do not care to make a side trip to Yellowstone Park, then at Livingston—instead of going south to Gardiner for the park—keep straight west, going over Bozeman tunnel, thence to Bozeman. The Commercial Club of Bozeman has established fully equipped camps at convenient points for those who desire to spend a little time in that part of the country where there is good hunting.

In leaving the town of Bozeman go northwest to Belgrade, Central Park, Manhattan, to Logan. Do not go into Three Forks, but keep to the right of Three Forks river, thence to Lombard, then on over a mountainous country north to Townsend; going north to Winston, then into Helena. This trip from Billings to Helena, Mont., has been made in two days.

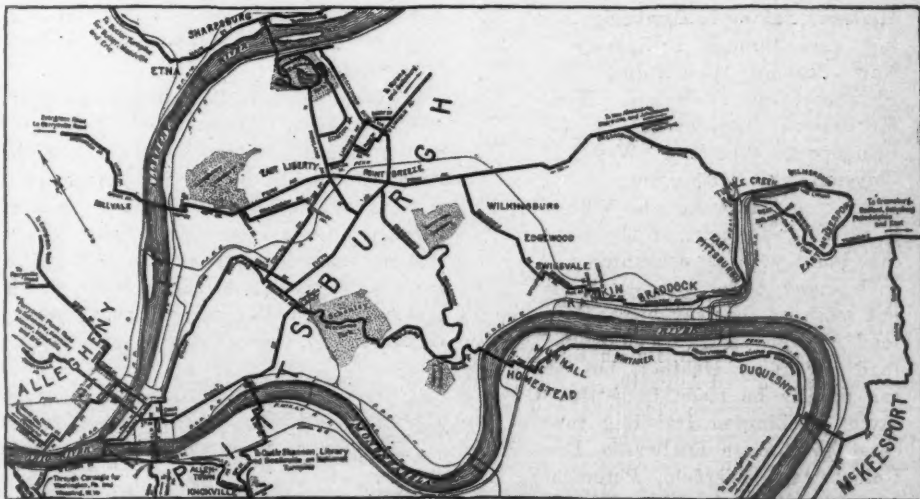
Continuing on to Missoula, over good roads practically all the way, the route is north from Helena, going over the main

chain of the Rocky mountains at Lincoln; from Lincoln follow the Blackfoot river and at Bonner, which is only a short distance from Missoula, you will again strike the Northern Pacific railroad which is followed to Missoula, where you will have to ship your car over the divide to Spokane, Wash. Eventually this portion of the route will be opened to motorists, but at the present time it is impassable.

According to the Washington state tour book the trip from Spokane to Seattle is still one fraught with some difficulty, but eventually will be a fine motor route. Leaving Spokane you will pass through Medical Lake, Reardon, Davenport, Fellows, Creston, Wilbur, Gooan, Almira, Hartline, Coulee City, Douglas, Orondo, Wenatchee, Malaga. Going over the Wenatchee mountains to Ellensburg the roads are anything but good, in places nothing but a mere trail, and an altitude of 5,000 feet is attained. From Ellensburg proceed to Cle Elum. At this point motorists generally ship their cars either to Snoqualmie Falls or Seattle. If the car is shipped to Snoqualmie Falls, the route into Seattle is through Fall City, Issaquah, Renton, Rnerton, Georgetown, Seattle. For complete running directions through Washington you are referred to the Washington state tour book compiled by G. F. Beck, Seattle, Wash. It would be well for you to carry block and tackle, shovel and plenty of rope and other devices for use in bad places. A light car would make the trip much easier than a heavy one.

Ample repair facilities will be found in all of the towns in Montana and if you are not afraid of a few hills, motoring in the northwest states will be found a most enjoyable sport.

Seattle to Portland lies through Kent, Chehalis, Castle Rock, Kelso, Kalama, Lewis, Tacoma, Roy, Olympia, Centralia,



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MOTOR ROADS LEADING OUT FROM PITTSBURG, PA.



THREE ROUTES BETWEEN PORTLAND AND ST. PAUL

River and Vancouver, traversing the Pacific highway. The road from Chehalis to Vancouver, Wash., is only fairly good.

A route from Minot which would take you through the northern part of Montana to Helena passes through Berthold, White Earth, Williston, Buford, Culbertson, Popular, Wolf Point, Nashua, Glasgow, Hinsdale, Saco, Malta, Harlem, Chinook, Havre, Benton, Great Falls, Cascade, St. Peters Mission, Wolf Creek and Helena.

From a scenic standpoint you will find this northern trip very beautiful. Just out from Wolf Point the trail winds in and out among the foothills, and from St. Peters Mission you follow the road higher and higher into the mountains when all of a sudden, rounding a curve, the Rockies come in full range.

#### DETROIT-CHATTANOOGA ITINERARY

Covington, La.—Editor Motor Age—Please write me all the information possible in regard to a route from Detroit, Mich., through Indianapolis, Cincinnati and Louisville and thence on to Memphis or Chattanooga.—J. L. Smith.

There are two routes to choose from in traveling from Detroit to Indianapolis—one by way of Ft. Wayne, Ind., 308.5 miles, and the other by way of Jackson, Mich., and South Bend, Ind., 344.4 miles. The Detroit-Ft. Wayne-Indianapolis leg carries you through Dearborn, Wayne, Ypsilanti, Saline, Clinton, Tecumseh, Adrian, Madison, Lyons, Ottosee, Wauseon, Napoleon, Okalona, Defiance, Brunersburg, Hicksville, Maysville, Ft. Wayne, Huntington, Mt. Etna, Marion, Fairmount, Summitville, Alexandria, Anderson, Pendleton, Eden, Maxwell, Greenfield and Cumberland. The longer route through South Bend takes you by way of Dearborn, Wayne, Ypsilanti, Ann Arbor, Chelsea, Grass Lake, Jackson, Parma, Albion, Marshall, Battle Creek, Augusta, Comstock, Kalamazoo, Paw Paw, Decatur, Dowagiac, Niles, South Bend, Lakeville, Lapaz, Plymouth, Argos, Rochester, Fulton, Matea, Logansport, Deer Creek, Burlington, Michigantown, Kirlin and Augusta.

From Indianapolis to Cincinnati you will travel through New Palestine, Carrollton, Morristown, Rushville, Connersville, Brookville, Cedar Grove, Harrison, Miami, Cheviot; and from Cincinnati to Louisville the

route goes through Covington, Erlanger, Florence, Walton, Crittenden, Dry Ridge, Williamstown, Blanchett, Corinth, Georgetown, Lexington, Frankfort, Peytona, Shelbyville, Boston, Middletown and St. Matthews.

The stretch from Louisville to Nashville will take you through Buechel, Ferncreek, Mt. Washington, Cox's Creek, Balltown, Athertonville, Buffalo, Magnolia, Pikeville, Hardyville, Bear Wallow, Glasgow Junction, Bowling Green, Franklin, Mitchell, White House and Goodlettsville, continuing to Mt. Pleasant through Brentwood, Franklin, Spring Hill and Columbia. From Mt. Pleasant the road leads to Chattanooga and two roads to Memphis. The shorter road to Memphis lies through Perryville, Jackson and Brownsville; the longer road, which the Glidden tourists used, passes through Summertown, Lawrenceburg, Pleasant Point, Loretto, Greenhill, St. Florian, Florence, Sheffield, Tusculumbia, Barton, Cherokee, Iuka, Burnsville, Corinth, Rogers Springs, Saulsburg, Grand Junction, Moscow, Pipertown, Bailey, Germantown, Aulon and Memphis. Mt. Pleasant to Chattanooga lies through Manchester and Jasper. Mileage, running directions and optional routes can be found in the Automobile Blue Book. A map covering this route was published in Motor Age issue June 15, page 28.

#### EDWARDSVILLE TO OMAHA ROUTE

Edwardsville, Ill.—Editor Motor Age—Kindly publish the best route from Edwardsville, Ill. to Omaha, Neb.—William Burroughs.

Leaving Edwardsville go through Worden, Staunton, Mount Olive, Litchfield, Springfield, Middletown, Delavan, Dillon, Peoria, Mossville, Rome, Chillicothe, Sparland, Henry, Putnam, Bureau, Princeton, Wyand, Sheffield, Geneseo, Brier, Bluff, Moline, Davenport. Here you will strike the river-to-river road across Iowa, which passes through Durant, Wilton, Moscow, West Liberty, Iowa City, Oxford, Home-



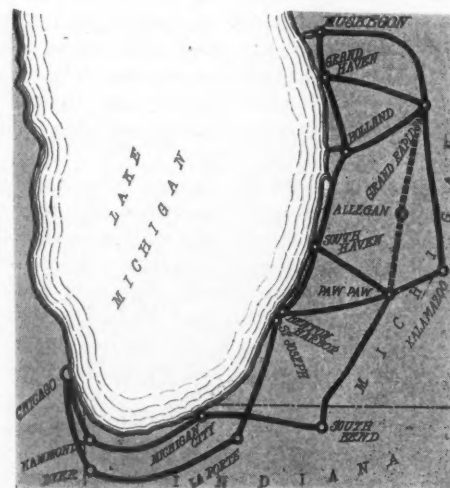
stead, Marengo, Ladora, Brooklyn, Grinnell, Newton, Colfax, Des Moines, Wauke, Ortonville, Adel, Redfield, Monteith, Guthrie Center, Exira, Oakfield, Atlantic, Marne, Walnut, Avoca, Minden, Neola, Underwood, Council Bluffs. Distance 635 miles.

A southern route via Kansas City is as follows: Edwardsville, St. Louis, St. Charles, Warrenton, Martinsburg, Mexico, Higbee, Glasgow, Marshall, Higginsville, Independence, Kansas City, White Church, Wallula, Leavenworth, Lowemont, Atchison, Hall, St. Joseph, Savannah, Maryville, Wilcox, Tarkio, Shenandoah, Randolph, Glenwood, Council Bluffs, Omaha—553 miles. For complete running directions you are referred to volume 4 of the Blue Book.

#### OMAHA-MINNEAPOLIS ROUTE

Cordova, Neb.—Editor Motor Age—Will Motor Age publish a route from Omaha, Neb., to Minneapolis, Minn.—F. M. D.

According to Volume 4, the Middle West, of the Blue Book series for 1911, the route from Omaha to Minneapolis, 465 miles, is as follows: Omaha, Council Bluffs, Minden, Avoca, Atlantic, Lorah, Exira, Guthrie Center, Redfield, Adel, Des Moines, Altoona, Colfax, Newton. From Newton the route lies straight north through Laurel, Marshalltown, Whitten,



SHORT CUT FROM PAW-PAW TO GRAND RAPIDS, MICH.

Ackley, Hampton, Rockwell, Mason City, Manley, Kensett, Northwood, Glenville, Albert Lea, Geneva, Owatonna, Milford, Fairbault, Dundas, Northfield, Farmington, Minneapolis.

#### SPOKANE TO ST. PAUL

Spokane, Wash.—Editor Motor Age—Will Motor Age kindly outline the most feasible route consistent with good roads and the quickest time from Spokane to St. Paul, Minn. I have been told I would have to go by way of Denver, but would prefer a shorter route if possible.—E. T. Johnson.

The best plan for you to follow is to ship your car to Missoula, Mont., then motor to



Billings. At Missoula you will strike the Northern Pacific Railroad, and follow it to Bonner, and the Blackfoot river to Lincoln. The road between Lincoln and Helena is excellent the entire distance. From Helena go through Winston, thence over a rather mountainous country to Townsend, going to the left of Three Forks, but not through it, then through Logan, Manhattan, Central Park, Belgrade, Bozeman, Livingston, Big Timber, following the trail through Dead Man's Canyon to Merrill, Columbus, Park City, Laurel, Billings. Here you should branch off south following the C., B. & Q. tracks through Basin to Thermopolis.

From Thermopolis go through Moneta, Mokoma, Casper, Douglass, Foxton, Wheatland, Goldsmith and Cheyenne, thence east through Sidney and Julesburg. Here you strike the official trancontinental route, which follow through Ogallala, North Platte, Kearney, Grand Island, Central City, Fremont, Omaha, Council Bluffs, Minden, Atlantic, Brayton, Guthrie Center, Adel, Des Moines, Mitchellville, Colfax, Newton.

Newton to St. Paul, according to the Blue Book, volume 4, 1911 edition, is through Laurel, Marshalltown, Hampton, Mason City, Manly, Northwood, Albert Lea, Owatonna, Milford, Fairbault, Northfield, Rosemont, St. Paul.

The map on page 28 of this issue shows alternate routes, the extreme northern route being that of the Twin City-Helena reliability tour, during the latter part of the present month, and a town-to-town itinerary of which is given in Motor Age, issue June 29, pages 24 and 25.

#### MAKES A CORRECTION

Dowagiac, Mich.—Editor Motor Age—In the June 29 issue of Motor Age directions for a route from Chicago to Muskegon via Kalamazoo and Grand Rapids are given. I have noticed several times in giving directions to Grand Rapids Motor Age followed the Blue Book route via Kalamazoo. This route can be shortened considerably and just as good roads obtained by going from Paw Paw to Allegan and on through to Grand Rapids, as shown on inclosed diagram. The road is easy to follow and is very good for a dirt road all the way.

Motor Age also states the road via Benton Harbor, South Haven, Grand Haven to Muskegon is not recommended in bad weather. I would advise that it is only in bad weather that it is passable. The roads are so sandy that in dry and fine weather it is almost impossible to get through from Holland to Grand Haven, but when they are thoroughly soaked it can be done, although it is a dreary, desolate country to go through.—A. B. Gardner.

#### PERU TO MINNEAPOLIS

Peru, Ind.—Editor Motor Age—Through the Routes and Touring Department will Motor Age kindly furnish me with a route from Peru, Ind., to Minneapolis, Minn., giving the towns passed through



and the total mileage?—Daniel W. Baggs.

The total mileage for this trip figures 760.5 miles. You pass through Mexico, Perrysburg, Greenoak, Rochester, Plymouth, Donaldson, Hamlet, Hanna, Wanatah, Valparaiso, Wheeler, Hobart, Highlands, Hammond, South Chicago, Jackson Park, Chicago, Highland Park, Half Day, Diamond Lake, Ivanhoe, McHenry, Richmond, Genoa Junction, Lake Geneva, Delavan, Janesville, Evansville, Rutland, Oregon, Madison, Pleasant Grove, Ashton, Sauk City, Prairie du Sac, Baraboo, Reedsburg, Wonewoc, Union Center, Elroy, Glendale, Kendalls, Ontario, Cashton Station, Portland, St. Joseph, La Crescent, Ridgeway, Witoka, Pleasant Valley, Winona, Stockton, Lewiston, Utica, St. Charles, Dover, Chester, Rochester, Oronoco, Pine Island, Zumbrota, Hader, Wastedo, Cannon Falls, St. Paul and Minneapolis.

The Automobile Blue Book covers the entire trip very thoroughly with optional routes as well, giving maps, names of garages, hotels, road conditions, mileage, running directions, etc.

#### FROM WISCONSIN TO COAST

Williams Bay, Wis.—Editor Motor Age—Will Motor Age give us a motor car route from Williams Bay, Wis., to San Francisco, Calif. We intend to leave in about 2 or 3 weeks and it is our intentions to travel about 150 miles a day. We would like to know the best and shortest route. A. Hollister & Sons.

A route outlined by the Blue Book as far as Omaha is as follows: Williams Bay, Fontana, Walworth, Chemung, Belvidere, Cherry Valley, Rockford. This portion of the route is over good roads during the summer months practically all the way. From Rockford go to Dixon, Ill., through Byron, thence west to Omaha over what is known as the Official trancontinental route, or through Sterling, Clinton, Elvira, DeWitt, Grand Mound, Wheatland, Lowden, Clarence, Mechanicsville, Lisbon,

Mount Vernon, Marion, Cedar Rapids, Belle Plaine, Chelsea, Montour, Butlerville, Marshalltown, State Center, Nevada, Ames, Boone, Ogden, Beaver, Grand Junction, Jefferson, Seranton, Glidden, Carroll, Denison, Dow City, Logan, Missouri Valley, Council Bluffs, Omaha. From Omaha continue over the Official trancontinental route to San Francisco, which through Nebraska follows the Platte river valley through Fremont, Columbus, Central City, Grand Island, Kearney, North Platte, Ogallala, Julesburg, Sidney, Cheyenne, Sherman, Laramie, Medicine Bow, Fort Steele, Rawlins, Bitter Creek, Rock Springs, Granger, Evanston, Ogden, Kelton, Lucin, Wells, Elko, Palisade, Battle Mountain, Winnemucca, Lovelocks, Reno, Truckee, Colfax, Sacramento, Stockton, San Francisco.

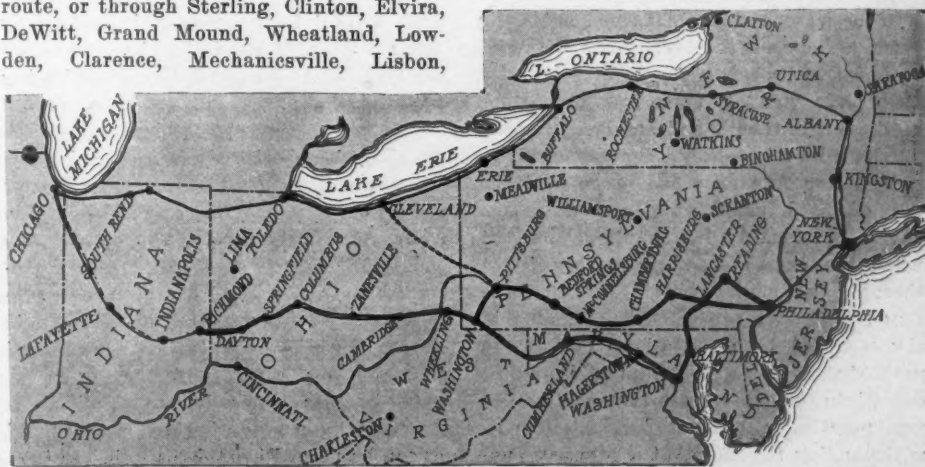
#### CHERRYVALE TO NEBRASKA CITY

Cherryvale, Kans.—Editor Motor Age—Will Motor Age furnish me with a route from Cherryvale, Kans., via Kansas City to Nebraska City, Nebr.? There I shall take the route to Denver which was published in Motor Age, with sketch map, June 15 issue.—Chester M. Francis.

Leaving Cherryvale follow the Santa Fe railroad tracks through Morehead, Thayer, Earlton, Chanute, Humboldt, Iola, Carlyle, Colony, Garnett, Ottawa, and from Ottawa north and east to Wellsville, Edgerton, Gardner, Olathe; here you leave the Santa Fe tracks and follow the Frisco and electric line to Lennexa, Merriam to Rosedale and into Kansas City.

From Kansas City follow the Glidden tour route of 1910 as far as Shenandoah, which passes through White Church, Piper, Lansing, Leavenworth, Lowmont, Atchison, Hall, St. Joseph, Savannah, Maryville, Burlington Junction, Tarkio, Shenandoah. Here you strike the Waubensie trail, which follow through Sidney to Nebraska City, Neb. At this point follow the route to Denver which you have planned to take and which was outlined in Motor Age, June 15 issue.

You will find many interesting side trips out of Denver. Estes Park, Uneva Lake and Colorado Springs should not be omitted.



ROUTE FROM RICHMOND, IND., TO WASHINGTON, D. C., AND RETURN BY WAY OF PROMINENT CITIES ON THE GREAT LAKES

## OILING MODEL H COLE

SUMTER, S. C.—Editor Motor Age—  
I have two Cole model H roadsters, 1910 models, with 4 by 4 engines. The Cole people state they have no instruction book covering this type of car and I understand they have ceased making it. Therefore, I beg to ask of you the following information:

1—The gears driving the magneto are at the front end of the engine in a compartment by themselves. This compartment is separated from the crankcase by a felt lining, which I can make reasonably tight. Please advise if it is well to fill this compartment full of non-flowing oil or grease, or should regular light cylinder oil be used? There is not much lost motion in these gears, but they make a little noise.

2—The oiling system of the Cole consists of a reservoir at the bottom of the crankcase, which pumps the oil into two pans, from which the cranks take it up. There is a petcock in this pump, which never seems to do anything, whether you turn it on or off. It is presumably placed there for the purpose of testing the pump to see whether or not same is working, but if open when the engine is running, no oil comes out. It may be possible that the opening of this petcock admits air to the pump, thereby lessening the flow of the oil. Therefore the petcock may be for the purpose of regulating the amount of oil drawn up from the supply. Kindly advise if this is so.

3—This car is equipped with a leather face cone clutch. Please advise proper treatment and oil to use on this clutch.

4—The transmission gears are in an oil-tight casing. They are the usual sliding gear type. This case does not leak oil into the clutch compartment, therefore please advise whether light oil or heavy grease is the best to use.

5—One of the front wheels has been dished by striking something at high speed. The rim normally is flared outward, but since this accident, the entire rim is dished inward. Please advise how this wheel can be straightened and if a repair is made, will it be permanent?

6—Considering the oiling system this car has, does Motor Age recommend Oildag in same, and does it consider grease with this material to be better for differential, etc., than plain grease? I am now having one of these cars rebuilt and am about to take a 1,000-mile trip.—H. R. Van Deventer.

1—Motor Age does not recommend the use of hard non-flowing grease in the engine gearcase for the simple reason that when the excess grease has worked out through the engine bearings it will be found that that grease which remains in the case has been packed up out of the path of the gears, and being unable to flow down into the gears again they continue to run practically without lubrication notwithstanding the fact that a generous supply of grease adheres to the walls and corners of the case. Grease of this kind will

# The Readers'

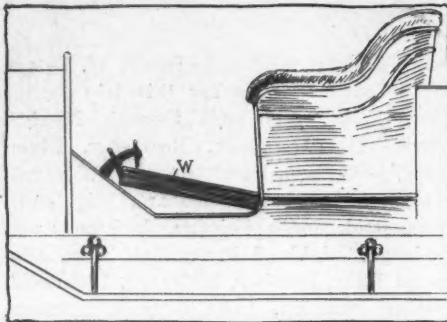


FIG. 1—HOLDING OUT THE CLUTCH

deadens the sound but does not furnish proper lubrication, therefore it would be better to mix sufficient oil with the grease so that it will flow but still retain a very thick, creamy consistency.

2—The little oil cock of which you speak, is intended to drain the splash compartments of the crankcase oiling system when a new supply is put in. The reason nothing comes out when the cock is opened most probably is that it is stopped up. If you were to open it and then work a wire through it, it is quite possible that some results can be obtained. It has no other object and is only intended to enable one to drain the splash compartments of the case without having to remove the lower half of the case for the purpose.

3—As you neglected to state the nature of the trouble you are having with your clutch, Motor Age is at a loss to know the treatment to recommend. As long as the clutch works properly it requires no treatment whatever. If the clutch should be taking hold too fiercely, it is a sign that it is getting dry and the treatment in this case is to soak the leather with neatsfoot or castor oil. The way to go about soaking a clutch in neatsfoot oil consists in either removing the clutch from the car and allowing the clutch to rest in a bath of the oil, or, in case you do not wish to remove the clutch, you may keep it held in a disengaged position by using a stick of wood W, Fig. 1, between the front seat and the clutch, after having removed the foot-boards so as to render the clutch accessible. With the clutch disengaged and with a pan arranged below the flywheel to catch the excess oil, pour the oil onto the leather face of the clutch while you slowly revolve the clutch with one hand. When you are sure that a generous supply of the oil has been thoroughly distributed over the entire face of the clutch, leave it stand in the disengaged position over night. If the clutch is webbed, holes generally are provided in the webs by means of which a supply of oil can be poured behind the web. In such construction it is merely necessary to pour a cupful of oil behind the clutch, then

EDITOR'S NOTE—In this department Motor Age answers free of charge questions regarding motor problems, and invites the discussion of pertinent subjects. Correspondence is solicited from subscribers and others. All communications must be properly signed, and should the writer not wish his name to appear, he may use any nom de plume desired.

while it flows out at the bottom revolve the clutch so that the oil will be thoroughly distributed over the face of the leather.

4—Heavy grease or non-fluid oil is recommended for the transmission gearset.

5—It is quite possible that your wheel may be permanently repaired in the following manner. Remove the wheel and the hub flanges, then set the wheel on a barrel or something of the sort with a block standing up in the barrel whose end will reach a height of about 1 inch or perhaps 2 inches below the center of the wheel. Then use a sledge or some heavy object with which, by means of a single blow the wheel may be again dished into its original form. If the spokes seem loose take small pieces of steel about the thickness of a hacksaw blade and drive or wedge one of the pieces between every other spoke. Then soak the ends of the spokes at the hub with hot boiled linseed oil, letting the oil run freely in the cracks for 3 or 4 minutes. After this replace the hub and screw up the flange bolts tightly. Do not use the car after this for about 12 hours so as to give the spokes a chance to swell a trifle and set tightly. The longer the wheel stands without use the better. Be careful not to get the wedges too large so as to interfere with the replacement of the hub flanges. Should the wheel be untrue after this, it may be trued up as follows:

In order to line up a set of wheels it first is necessary that they be perfectly true. To ascertain if the wheels are true, one has but to jack up the wheel so it may be turned freely, then hold a rule or stick or the like close to the rim of the wheel, in a fixed position, and turn slowly. The wheel is jacked up and a block is placed beside it to steady the hand which holds the rule close to the rim of the wheel. As the wheel is revolved slowly the distance between the rim and the end of the rule is noted; if it remains the same throughout the revolution of the wheel, the wheel is true; if it varies, the wheel is untrue. If a wheel is not out more than a quarter of an inch it generally can be trued up very easily with a block of wood and a hammer. This, however, is possible only when the fault is due to the rim having been moved on the felloe. If the rim itself is bent, which is not often the case, it will have to be removed from the felloe, heated and then pounded back into shape while



# Clearing House

**EDITOR'S NOTE**—To the Readers of the Clearing House columns: Motor Age insists on having bona fide signatures to all communications published in this department. It has been discovered that the proper signature has not been given on many communications, and Motor Age will not publish such communications, and will take steps to hunt down the offenders of this rule if it is violated.

red hot, or a new rim fitted. The most simple method of truing up a wheel is shown at the left in Fig. 2. In this case it was found in testing the trueness of the wheel that at the point A the distance between the end of the rule and the rim was almost  $\frac{1}{4}$  inch and at the point B it almost touched the end of the rule. By taking a block of wood, holding it against the felloe F, just opposite the point A, and striking a single sharp, light blow with a hammer, as indicated, the rim R moved just the required distance in the direction of the arrows and assumed its original true position. Of course it always is not possible to get a wheel true with a single blow of the hammer, but the method nevertheless is very effective and simple to perform.

6—Motor Age does not see why any preparation containing pure graphite and oil such as that to which you refer should not be advantageously used in the rear axle.

## PREFERS BATTERY TO MAGNETO

Sauk Center, Minn.—Editor Motor Age—A few days ago the manager of the garage here asked me if I would take a set of dry cells 10 or 12 miles out in the country to a car stalled for want of a spark. Arriving at the designated place I was greeted by the owner of an Overland car and asked if I was the one that had come to help him out. We soon got busy. I asked him for his ammeter and he had none, and went to my car and got mine and tested the batteries. Only one of the set would raise the hand but a very little, and trying to get a spark in the cylinders of a 35-horsepower car! He could not turn the crank fast enough to get a spark from the magneto, and there he was truly stalled and nearly 12 miles from nowhere! We placed the new set of batteries in position, turned the crank and away went the motor. The owner told me he had those batteries in a long time and they had never before refused to start the engine. He said he did not know what the matter was unless it was the weakness of the batteries, but he had no way of knowing what their amperage was, and he would get a good ammeter and keep it in his car after this trouble.

I always carry both ammeter and voltmeter, as they are sure to tell you what you are most in need of when everything

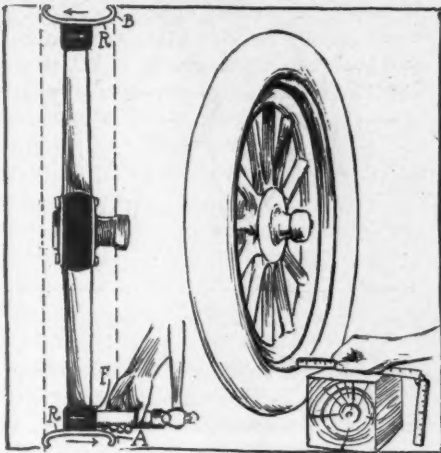


FIG. 2—TRUING UP A WHEEL

appears O. K., but no spark is obtainable.

Another thing that is very easy to carry and always to be had at a nominal price is two, or better four, dry cells to fall back on when sorely in need. If one has room it is a good plan to carry a good storage battery of say 60 amper hours, 6-volt, and this gives the best possible ignition aside from the magneto. I have used one to run 1,000 miles when the other ignition failed, and it costs me 50 cents to charge, which, considering the repairs of magnetos, which are rather costly and but few garages understand them, I consider the most reliable of all forms of ignition that I have tried. A magneto will give a hotter spark, but I think it is harder on the contact points, which are quite costly to replace. I can get as much speed with a good storage battery as I can with a magneto, and I have used one many years with lots of trouble with it. Of course the magneto is satisfactory when it is right, but when it won't start the motor, what are you going to do about it? Comparatively few motorists are competent to repair or adjust a magneto when it goes wrong, and a good storage battery will give warning when it is going to fail, and you can get them charged at nearly all small towns and at the price stated, which is very cheap mileage ignition.

Then again, the magneto wears out, while the good storage battery gets better with age and proper care, and its life is practically endless—its care and use must be taken into account. I think it is much easier to adjust the tremblers for storage ignition than magneto, for much depends on the rotation of the armature to get the spark, and being generated by friction as the friction increases the spark will be naturally much hotter. Many devices, such as flyballs, springs, etc., have been devised with more or less success, but they are more or less liable to get out of order and at times you may find your points so badly pitted as to need replacing with

new, with the attendant adjustment and bother. What the average motorist wants is a simple ignition, one that will be easy of management with a weak woman to manage it, and this we have in the standard storage battery.

What would the owner to whom I carried primary ignition have done without the starter? He would be there today, undoubtedly, or get pulled in. He had a fine magneto, but start the engine it wouldn't, with all the violent crankings his muscular arm could give, but the moment the little 25 cent dry cells were called upon to give their life that another might come to life they promptly responded, when the \$75 or \$100 machine remained silent until called to life by the much-despised little dry cells.—A. D. Carpenter.

## HAS RADIATOR TROUBLE

St. Louis, Mo.—Editor Motor Age—I was much interested in the radiator talk in Motor Age, issue June 8, page 19. My White gasoline car is running hot, and I should like some advice through the Readers' Clearing House. It was suggested that scale might be forming, so I put in a saturated solution of sal ammoniac as follows: one and one-half pounds sal ammoniac to each gallon of water, run the engine an hour, disconnected the radiator and flushed it out. This apparently had no effect beyond turning all the brass parts green and arousing my fears as to corrosion. Was it harmful? Should I have used the soda solution given in that issue? Ought I to do it now? When flushing, after using the soda solution is it necessary to disconnect the radiator or will it flush as well through the regular drain cock?

This is an en bloc engine, but I noticed when flushing it cooled unevenly. One corner of the engine near the dash stayed pretty warm some time after the rest of the engine had cooled. Why was this? Anything wrong, or merely because it was farthest away from where the cold water was entering? The water pump is working O. K. The sight oil feed seems to be working properly, and I always keep plenty of oil in the crankroom, but, while the water in the honeycomb radiator never boils, it heats right up to a simmering point, after a few minutes running. What shall I do?—Doc.

If the radiator has been thoroughly flushed out with water after using the sal ammoniac it is quite probable that the results will not be harmful. Sal ammoniac, however, is not to be recommended for cleansing scale from the inside of the cooling system. It has a tendency to rust the walls of the waterjackets, and sometimes causes corrosion of metals included in the makeup of the radiator. The soda solution is very much better for the removal of deposits in the tubes of the radiator, and even this should be thoroughly flushed out later on and the radiator rinsed with clear water. It should not be necessary to remove the radiator from the car to flush it out, but it is better to remove it and

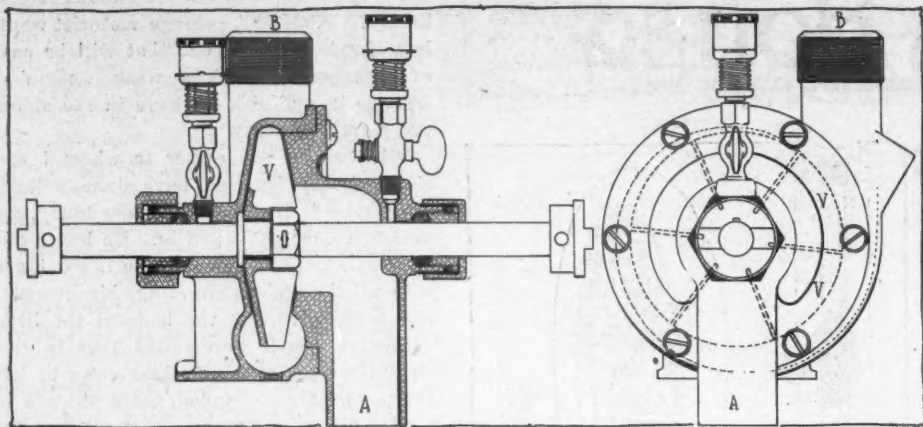


FIG. 3—SHOWING FEATURES OF CONSTRUCTION OF CENTRIFUGAL WATER PUMP

run water through it in an opposite direction to the regular flow.

The uneven cooling of the cylinder jacket undoubtedly is due to the relative position of the inlet water manifold, as you suggest. It is the opinion of Motor Age that your overheating is due either to an over-rich mixture or carbon deposits in the cylinders. If the overheating cannot be eliminated by having the carburetor properly adjusted and the carbon scraped out through the plugs over the valve chambers, it would be advisable to remove the cylinders and have the carbon scraped from the walls of the combustion and valve chambers and from the piston head. At the same time it might be advisable to have the waterjackets thoroughly cleaned out.

#### AS TO INSURANCE

Prophetstown, Ill.—Editor Motor Age—Will Motor Age please state why insurance companies will not write insurance on some makes of motor cars, the Overland, for instance? We understand that insurance cannot be had on steam cars, but the Overland and some others refused are gasoline engines.—P. W. Kempster & Co.

The insurance companies will not insure White and some Stanley steam cars, but Motor Age knows of no companies that will not insure the Overland, or any other modern make of motor car driven by internal combustion engine.

#### CHANGING CARBURETERS

Waukegan, Ill.—Editor Motor Age—Since being a subscriber to Motor Age I have read in the Readers' Clearing House columns many complaints of misfiring when throttling down to around 10 miles or less on high and the answers have always been about the same, viz.; look for leaks around intake joints; poor compression in some of the cylinders, etc.; but never a change of carbureters has been suggested. My model 10 Buick will not run under 15 miles without missing and would not when brand new. It is equipped with a model D Schebler. The Schebler people are making a model L which is entirely different and I am told by a man who has eight Buicks like mine that the L will permit me to run 5 miles an

hour without missing. He has changed D's for L's on a number of his Buicks. Surely all carbureters are not perfect, yet I do not remember that a change has been ever recommended. If they are beginning to make carbureters that will handle a worn out motor it might be well for some of us to know it. My Buick acts exactly like the E-M-F described by Clifford M. Eader in the issue of July 20. I am going to take this man's word for it and buy a model L Schebler.—Earl G. Alden.

#### ASKS ABOUT PUMPS

Lansing, Mich.—Editor Motor Age—Through the Readers' Clearing House kindly show in a detailed drawing a water pump which is most used on present-day motor cars; also a detailed drawing of an oil pump for motor cars. Kindly state why they have proven the most satisfactory. What size pump would I need to cool a T-head  $3\frac{1}{4}$  by  $4\frac{1}{2}$  motor, 100 revolutions per minute? Would also like to know the theory of construction of pumps.—Oscar R. Koehler.

1—The most popular type of water pump now in use is the centrifugal, which is illustrated in Fig. 3. A centrifugal pump is one in which the water is lifted and discharged through a pipe by the energy imparted by a wheel or blades revolving in a fixed case. In the pump shown in Fig. 3 the veins, V, are rotated at a high rate of speed from the engine, the pump shaft generally being driven by gears from the engine gears. The water enters the pump at A and is ejected from the periphery of the fan or the rotary member containing the blades or veins, V, through the outlet B, whence it is conducted to the waterjacket of the motor. Pumps of this description are perhaps the most popular, because they are reliable, simple and efficient.

In Fig. 4 a gear pump is shown such as is most generally used in circulating oiling systems. These pumps comprise two pinions which mesh together and rotate in a closed chamber which exactly fits their sides, and whose outside walls are arranged close to their periphery, so that there is practically no space for water to pass around them. Pumps of this character are very positive in their action and can be

driven at high speeds, but they suffer from a disadvantage that, should their rotation fail from any cause, the fluid circulation is effectually stopped, and when used in a cooling system, rapid heating of the cylinders naturally takes place.

The size of the pump will depend upon the design of the motor, as upon the amount of water necessary to carry off the heat generated by the motor would of course depend upon the heating, which would, in turn, depend upon the design. The amount of water would determine the size of the pump required.

#### ENGINE OVERHEATS

Redfield, Ia.—Editor Motor Age—I have a 4-horsepower gear-driven Orient which overheats. I use plenty of oil; it has good compression and climbs nearly all the hills on high gear, as it is geared about 7 to 1 on high. It runs about 1 mile and then preignites with the switch off. I keep the gasoline level low and shut off as much as possible, also keep the spark well advanced. There is no fan on the machine. Can Motor Age tell me what causes the overheating?—Virgie Lamb.

Your trouble apparently is due to carbon deposit on the walls of the combustion chamber and piston head, and it will be necessary to have this carbon removed before the overheating can be remedied. Carbon may be removed either in the old-fashioned way by tearing down the engine and scraping it off with a screwdriver or some similar scraping tool; or, perhaps, by using some of the carbon-removing devices or compounds now on the market. It also is quite possible that your trouble is

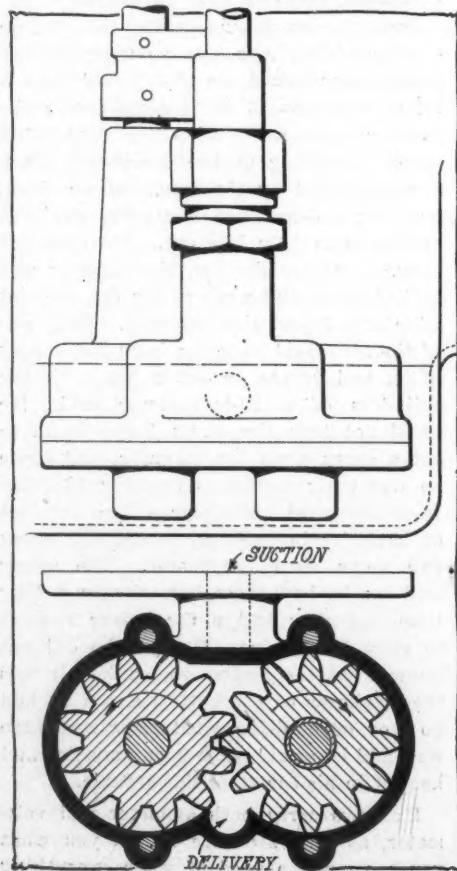


FIG. 4—GEAR PUMP CONSTRUCTION



due to an over rich mixture. An over rich mixture not only facilitates the accumulation of carbon deposits in the cylinder and causes overheating from this source, but also is capable of causing overheating in a perfectly clean engine because of the nature of the combustion. Proper adjustment of your carbureter might eliminate your trouble, but a thorough cleaning of the engine might be most practical nevertheless. To ascertain if the mixture is an over rich one, smell of the exhaust while the engine is running and firing regularly; if the odor is a pungent nauseating one, the mixture is too rich. It is necessary that the motor should not be mis-firing when this test is made, otherwise the unburnt gases mixed with the burnt ones will give the exhaust the same pungent odor that is characteristic of an over rich mixture, notwithstanding the fact that the mixture may be absolutely correct and the mis-firing is due to ignition trouble. A late spark also might be the cause of your trouble. The spark should be timed so that with the spark lever fully retarded the spark will occur when the piston is from  $\frac{1}{8}$  to  $\frac{1}{4}$  inch down on the explosion stroke. The motor should be run with the spark advanced as far as possible without producing a knock in the engine.

#### FOUR USING KNIGHT MOTORS

Los Angeles, Calif.—Editor Motor Age—Will Motor Age, through the Readers' Clearing House, give a list of American car manufacturers who are going to use the Knight or Mead motor in their 1912 models? In the June 22 issue of Motor Age it was stated that at least three prominent American manufacturers will use the slide-valve type of motor.—F. Stillwell.

Four companies have arranged to use the Knight motors on a royalty basis, these being the F. B. Stearns Co., Cleveland, O.; Columbia Motor Car Co., Hartford, Conn.; Dayton Motor Car Co., Dayton, O., and the Atlas Engine Works, Indianapolis, Ind.

#### SLIPPING CLUTCH ON ELMORE

Medford, Oreg.—Editor Motor Age—Through the Readers' Clearing House, kindly inform me as to what can be done with an Elmore expanding ring clutch to prevent slipping. I have repeatedly adjusted the clutch tension, but am unable to run the car at all, unless the band is treated to a gasoline bath every 40 or 50 miles. Can Motor Age suggest a remedy other than a new clutch? Is there anything that can be applied to the ring that will create the necessary amount of friction without injury or danger of overheating?—Subscriber.

Inasmuch as you have neglected to state the model to which you refer, it is difficult to give a definite diagnosis of your trouble and a remedy for it, for the Elmore cars have used three types of clutches in the last 3 years. Previous to 1910 a split-band clutch was used which was expanded by a cam, and it was necessary that this cam

be so adjusted that the clutch barely cleared or ran free when the cam was in the neutral position. It also was necessary that all parts were constantly well oiled and that the clutch was in proper alignment with the flywheel. Any wear of the clutch bearing would, of course, throw the clutch out of alignment and dragging would take place which would make it impossible to shift the gears without considerable grinding, and uneven wear of the clutch bands, which later on would cause slipping.

The 1910 clutch is shown in Fig. 5, and if your clutch is of this type the slipping is due either to lack of proper adjustment or the use of an improper grade of oil, or it is possible that the clutch spring has become weakened and either should be replaced or a piece cut off of it. To adjust the clutch the plate P should be removed and the nuts N on the adjusting stud so adjusted that when the clutch is engaged there will be  $\frac{3}{4}$ -inch of side play at the clutch collar C. This will insure that the wedge which contracts the clutch is not keeping the band from being properly expanded. When the proper adjustment has been obtained the nuts N should be securely tightened. To keep the clutch in good working order a teaspoonful of ice machine oil, which is a very thin substance, should be applied each day. Misalignment of the clutch would, of course, cause it to slip, but it is hardly probable that the large annular ball bearing that now supports the clutch is worn unless the car has seen considerable hard service. Should this be the case, however, a new clutch bearing will be necessary.

#### RACING QUESTIONS

Clinton, Ia.—Editor Motor Age—Kindly answer the following questions through the Readers' Clearing House:

- 1—Was the Knox car which finished ninth in the 500-mile race a stock car?
- 2—What were the three fastest laps driven in that race?
- 3—What car was the first to finish in the 230-300 class?
- 4—What American cars are entered in

the French grand prix this year?—Reader.

1—From the specifications that Motor Age obtained of the Knox car used in the 500-mile race at Indianapolis, it was a stock car in every respect except that the gear ratio of the rear axle was lower than that generally employed in the regular stock chassis.

2—Motor Age is not in possession of the lap times of this race and regrets it cannot give the information desired.

3—The 500-mile race was a free-for-all up to 600 cubic inches and consequently there was no 230-300 class.

4—A Ford car is the only American entry in the French grand prix.

#### KEROSENE AS A FUEL

Lisbon, N. D.—Editor Motor Age—Kindly answer the following questions through the Readers' Clearing House:

1—What changes would it be necessary to make in a four-cylinder gasoline engine in order to burn kerosene under heavy load, such as for commercial purposes?

2—Would it be necessary to use some other carbureter, or would a Schebler answer?—Otto E. Peterson.

1—In order to burn kerosene in the ordinary four-cylinder gasoline engine one must have a gasoline tank so connected to the carbureter that the engine could run on gasoline until thoroughly warmed up, and then the gasoline shut off and the kerosene turned on so that the motor would go right on running. Kerosene has been used in this way and given fairly satisfactory results. It is impossible, however, to start a motor on kerosene and it always is necessary to drain the kerosene from the carbureter and then fill it with gasoline whenever the motor is to be restarted. Another disadvantage of kerosene is that excessive carbon accumulations adhere to the cylinder walls and piston heads as the result of its continued use.

2—It is claimed that these results have been obtained with the Schebler carbureter, though no such claims are made by the Schebler company, and Motor Age has no authentic data on the subject.

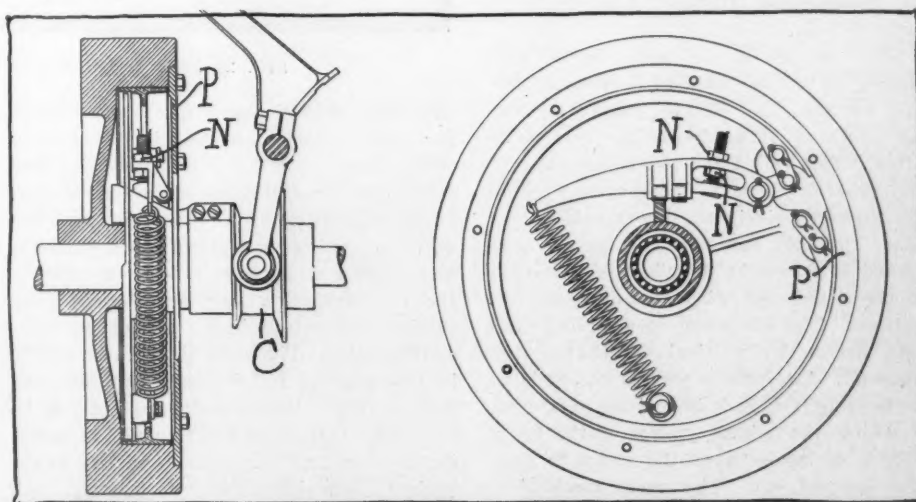


FIG. 5—SHOWING FEATURES AND ADJUSTMENTS OF 1910 ELMORE CLUTCH

# Thomas Company Has One Model

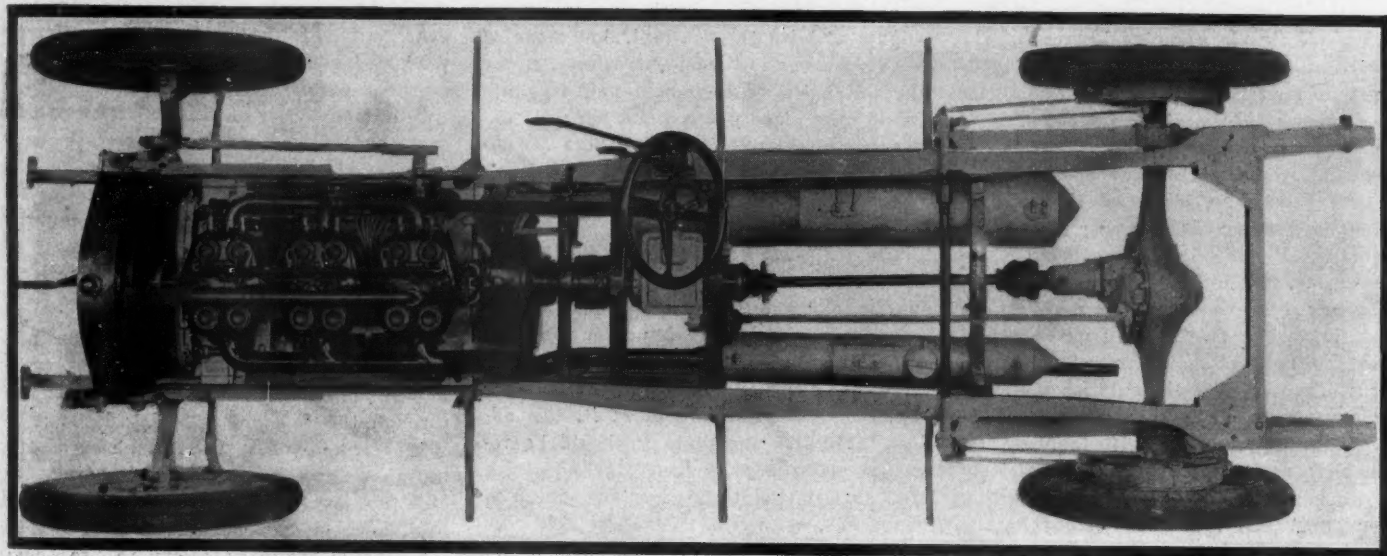


FIG. 1—1912 THOMAS CHASSIS WITH CYLINDRICAL GASOLINE AND OIL TANKS UNDER REAR OF CHASSIS

THE reduction in the number of annual models is well carried out in the case of the E. R. Thomas Motor Car Co. which for next year will confine all of its attentions to the production of one model, a six-cylinder car with cylinders  $4\frac{1}{4}$ -inch bore and  $5\frac{1}{2}$ -inch stroke. This model is a continuation of the present six-cylinder chassis, but carries for next year a host of improvements and refinements which will have an important bearing on the performance of the car. The chassis is being built in two wheelbase lengths, one of 134 inches, to take a seven-passenger, touring car body, and also a five-passenger phaeton body; the other wheelbase of 126 inches is for a four-passenger surrey type and also a two-passenger roadster.

Before enumerating many of the refinements that have been carried out, it will suffice to say that the general characteristics of this year have been maintained. The Thomas three-plate clutch is continued, the same gearbox design is listed, but the axles are 1912 Timken constructions, which are considerably stronger than those in use this year.

Most radical in the motor is the discarding of the mechanical lubricator, carried on the side of the crankcase, and the adoption of a circulating system of oiling. This called for the redesigning of the crankcase so as to incorporate a pump and oil reservoir in the lower half of the case. Exactly how this has been accomplished is shown in the view of this part of the crankcase with the oil pump in position. The oil pump is a sliding-vane type, driven by vertical shaft from the camshaft. The rotary part is eccentric to the housing, and in it is a diametrical slot, in which the sliding vanes work, there being a spring between the vanes to keep them pressed out. The pump mechanism is carried in a brass casting, which is held by cap screws to the base of the crankcase,

Crankcase Has Been Designed to Allow of Fitting Circulating Oiling System—A Complete Double Ignition Scheme Is Used With Two Switches—The Intake Manifold Is Changed

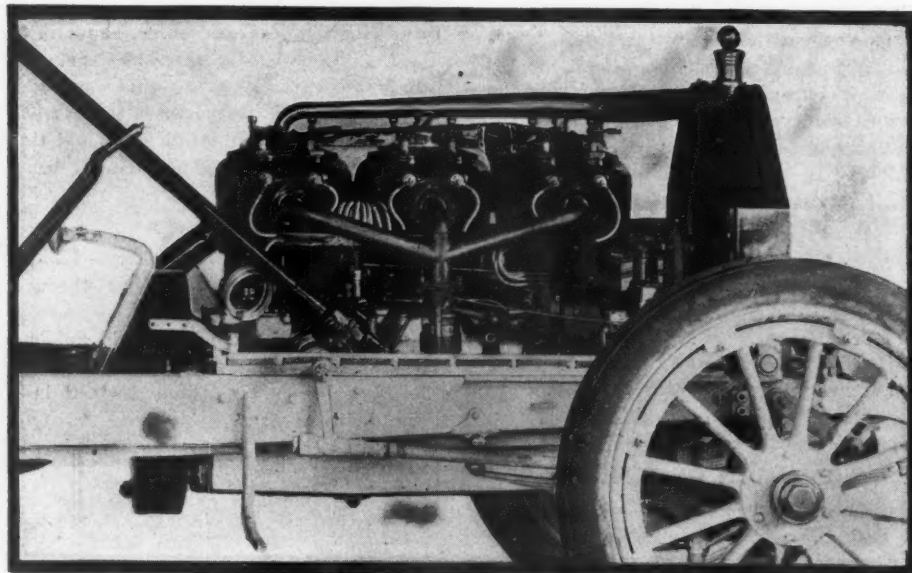


FIG. 2—NEW DOUBLE-Y INTAKE PIPE ON 1912 THOMAS

the drive shaft being brought up through the case. The crankcase is made with three large overflow openings and five transverse dams, thereby giving an oil compartment beneath each connecting rod. The oil pump taking its supply from a compartment beneath this part of the case forces the oil through a half-inch copper pipe carried horizontally in the side of the case, as illustrated. There are three holes drilled in this pipe to let the oil escape out of: One is at the timing gear case, one is in the front half of the case and the other in the rear half. A pipe from the pump leads to the sight feed on the dash and this flow of oil when it returns to the motor is delivered to the rear crankshaft

bearing. The vertical drive shaft for the pump is divided and fitted with telescoping ends making it a simple matter to drop the lower half of the case, without having to give any attention to the oil pump or its drive. In putting the lower part of the case back in place the halves of the pump shaft telescope when the case is in its correct position. Further oiling facilities include try cocks on the side of the crankcase, one stamped Full and the other Safety. When oil flows from the Safety a supply sufficient for 30 or 50 miles remains. The oil reservoir has capacity for  $3\frac{3}{4}$  gallons. In addition to the oil supply carried in the motor there is a reserve supply carried in a chassis tank. This tank ap-



# A Refinement on the Present Car Types

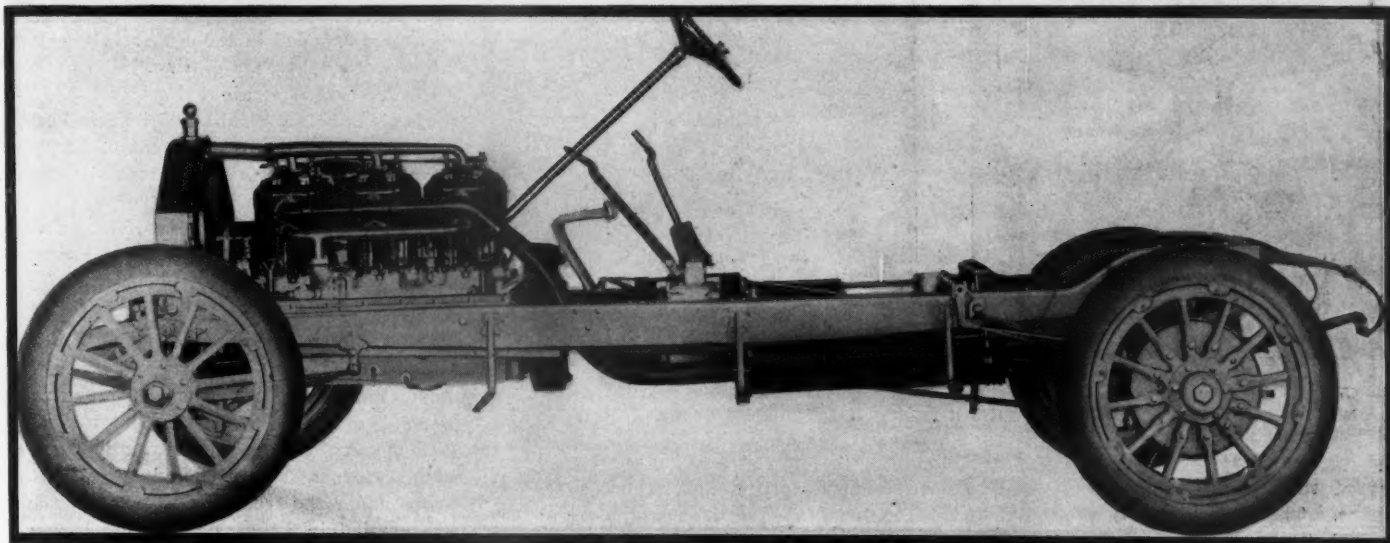


FIG. 3—THOMAS CHASSIS WITH HEAVIER FRAME IN WHICH FLANGES ARE OF FULL WIDTH TO KICK UP AT REAR

**Gasoline and Oil Tanks Placed Under the Chassis Leaving Ample Baggage Room in Body—Frame Heavier from End to End—Cowl Dash Adapted—Heavier Axles Are Fitted**



FIG. 4—NEW DESIGN OF CRANKCASE BASE SHOWING DISTRIBUTING OIL PIPE

appears in the plan illustration of the chassis Fig. 1. On the right of the propeller shaft is a pressed steel tank that will contain 24 gallons of gasoline; and on the left side is a similar-shaped oil tank with a capacity of 6 gallons. It is considerable of an innovation to place gasoline and oil tanks in this position. Besides being out of the way they offer a very low center of gravity. Each of the tanks is equipped with an air dome. These domes do not fill with gasoline or oil when the tanks are fully charged and as a result there is a quantity of compressed air on hand in them which helps the outward flow of the gasoline or the oil. A hand pump is used to force the oil from this tank into the

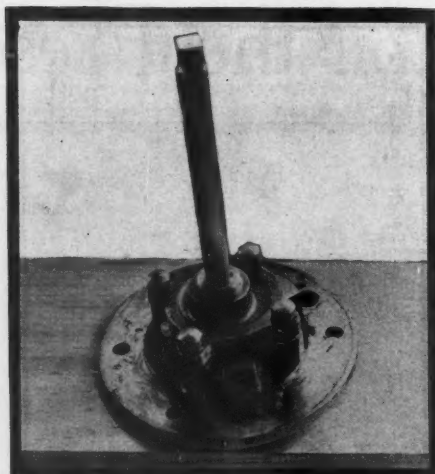
crankcase. There is a power gasoline pump.

The ignition details in the motor have been carefully gone over. Two independent systems are used, one a Bosch high-tension outfit, and the other a battery, single-vibrator coil and a combined timer-distributor. The two systems are separate from start to finish, there being even a separate switch for each. In order to get better results a change has been made in the spark plug scheme so that now the magneto plugs are mounted in the caps of the intake valves, one of the most powerful positions in which a plug can be placed. The battery set of plugs is placed horizontally in the cylinder wall on the intake side. In both sets a little cleaning up in

the carrying of the wires has been worked out. There are now two tubes carrying the wires to the plugs, that for the magneto over the cylinder heads and that for the battery set below and inside of the intake manifold.

A few changes appear in the carburation scheme. To begin with, a new design of intake manifold is used, which has been designed to avoid collecting condensed gasoline and so choking the motor. The design is a three-arm Y, the inner arm going to the middle pair of cylinders and the end arms to the end cylinder castings. The carburetor is also new. It is a Miller. This is a concentric design, the spraying nozzle placed inside of the ring float. When you open the throttle you lift the needle valve allowing more gasoline to flow from the nozzle and you also increase the diameter of the annular air space around the nozzle. This increase of space is due to the presence of a sleeve which slides vertically in the mixing chamber around the nozzle. This sleeve flares outward at its lower end, the flaring portion practically obstructing the air passage around the nozzle when the sleeve is in its lowered position, but when the sleeve is lifted the flared end gives a gradual increase in the air space. In this way the suction of the engine around the nozzle is maintained constant, or as near so as desired, without the use of an auxiliary valve. But this carburetor has other adjustments, one being a spring connection for lifting the needle valve and there is also an adjustment whereby the sleeve can be raised or lowered when the throttle is closed. The gasoline is fed under pressure from the tank under the chassis, the air pump for said pressure being driven off the exhaust camshaft.

One change in the motor which has improved its running qualities is the reduc-



FIGS 5 AND 6—THOMAS SLIDING-VANE OIL PUMP WITH COVER REMOVED AND ALSO IN PLACE—THE ECCENTRICITY OF THE ROTARY PART WITHIN THE HOUSING AND THE VANES CAN BE SEEN

tion of the cylinder compression to 62.5 pounds. This has been done by placing liners between the top of the crankcase and the cylinder base.

A few changes have been made in the water cooling system. One is the adding of a spring tension so that the fan belt will always be taught; the other is a change in the shape of the fan, it being a six-blade type with peripheral band to strengthen the ends of the blades.

The clutch remains unchanged and will be continued in the form that it has been used on Thomas cars for many seasons. It is a three-plate design. The middle plate is a brass one filled with cork inserts, and it is placed between two cast iron plates.

Between the clutch and gearset is a new type of universal joint. The one used at present is made up of an internal and an external gear in mesh. Instead of this one of the cross design is used. All parts are encased in an aluminum shield held in place by clamps and thumb screws.

The gearset is a compact three-speed selective set, is supported direct on two cross members of the main frame. Both main and secondary shaft are carried on F. & S. annular ball bearings. A change appears in the change speed lever control and for next year the slot for high and intermediate speeds is outside of the slot in which the lever works for low speed and reverse. This position is just opposite to what it is this year. A thrust ball bearing is used to take care of the clutch end thrust.

Between the gearset and Timken rear axle is a propeller shaft with two Spicer joints, one at each end. The Timken axle used differs from that of last year in that the pinion shaft with its pinion is now mounted horizontally, whereas for 1911 it was mounted at an angle, the front end of the shaft pointing upward in the direction of where the gearset would be. Under the new arrangement the angularity of both of the universal joints in the propeller shaft is made the same and a greater efficiency is claimed. Torque is absorbed by

a V-shaped torsion bar, which spans the differential at the rear end, and at the front is supported between upper and lower springs from a frame cross member. The two tubes forming this torsion piece are Shelby tubing  $\frac{1}{4}$ -inch wall.

The rear axle is a heavy construction, so far as the strength of the component parts is concerned. The housings is a steel stamping made in halves with these halves electrically welded together. Inside of this housing are nickel steel sleeves in which the wheel bearings are placed. These bearings are Timken rollers. The spring pads are loose on the housing and owing to the absence of radius rods the driving force is transmitted through the springs to the frame. The springs are a three-quarter type bolted to the frame at the front end.

Before leaving the back axle passing notice is directed to the two sets of brakes, one set internal and the other external. The brake drums are made 17 inches in diameter and with a 2.5 inch face.

The front axle is a heavy section Timken design made from nickel steel and tilted slightly rearward at the ends. The axle is mounted 1 inch in advance of the spring centers, this throwing the motor that much further to the rear and improving the riding of the car, which is claimed to hug the road better because of this arrangement. The front appearance of the car

has been enhanced by giving less curve downward to the spring horns, that is those forged pieces which bolt to the front end of the frame and attach to the front end of the spring. The tire rod back of the axle was dropped in the center for 1911 so as to follow the axle outline, but for next year the rod is straight from end to end. This gives better results and insures better and more permanent alignment of the two front wheels. All of the springs bolts front and rear have been fitted with automatic grease cups. The starting crank bracket has been improved so that now the crank remains in an upright position when not in use.

The Thomas models are peculiarly arranged for baggage carrying facilities as none of the space beneath the front or rear seats is occupied with gasoline tanks or tool space. The gasoline tank is carried under the chassis, thus leaving the entire space under the front seat free. The tools are carried in a box on the left running board, thereby leaving ample baggage space under the tonneau. The space beneath the front seat is divided, one portion for baggage, and the other, a cylindrical portion, is intended for carrying the storm curtains in. They can be rolled up and placed in this space.

The body equipment embraces new features in the style of the cowl, or heavily hooded dash, and in addition, the equipment of the cowl with a switchboard, extending across the entire front, which switchboard is within easy reach of the driver without his having to stoop.

On the left hand side of this switchboard are located the battery and magneto switches, the air pressure gauge for gasoline tank, the hand pump for air pressure to gasoline tank, the hand pump for air pressure to oil tank, air pressure gauge for oil tank and oil sight feed. This last shows a stream of oil in view when the motor is running. The pressure to the gasoline tank is taken care of by a mechanical air pump contained in the motor assembly.

The running board brackets are pressed steel and the running boards are so arranged that water will drain out under them along the side and in front when in service or when being washed.

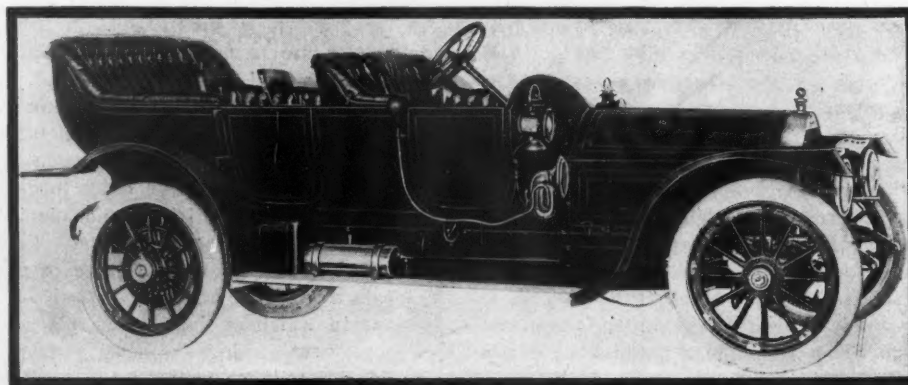


FIG. 7—THOMAS SEVEN-PASSENGER CAR FOR 1912



## The Maxwell Special—A New Type

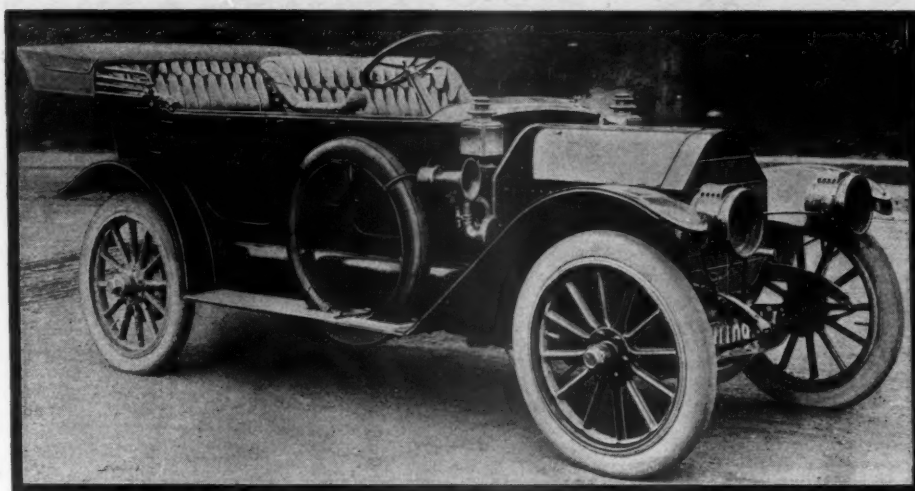


FIG 8—THE NEW MAXWELL SPECIAL, WITH FLUSH-SIDED BODY, NEW RADIATOR DESIGN AND MANY OTHER CHANGES FOR NEXT YEAR

IT is becoming a habit to look for more horsepower, more body capacity, more equipment and more finish at reduced cost. The 1912 announcements of low and medium-priced cars show this. But all has not been said. The end is not yet even in sight. This week the United States Motor Co. has spoken in connection with the Maxwell line, the announcement centering around the Maxwell Special, a five-passenger touring car, which bears few if any external resemblances to previous models and which incorporates not a few features new in this make of car.

The Special uses a new motor size, 4¼-inch bore and 5¼-inch stroke. It leans to the long-stroke type, the stroke-bore ratio being 1.23 to 1, the stroke being almost one-quarter in excess of the bore. It is rated at 30-horsepower. This is in excess of the S. A. E. formula rating for horsepower, but the higher ratio is occasioned by the longer stroke. Many makers are doing the same for 1912, when it comes to horsepower figures.

Apart from the motor this special has many new features—the body is a fore-door design with doors on a level with the top of the body. The emergency brake and change-speed levers are inside and placed at the right of the driver. The steering wheel is on the right side. The general body lines are quite different from previous Maxwell types, and this difference is accentuated by the new Columbia type of square-tube radiator, which is without the horizontal cross band of brass which has been a distinguishing feature of Maxwell cars since their inception and up to the present time.

There are many changes that do not appear on the surface or on a casual glance at the exterior. The rear axle is a floating type—the axle drive shafts can be withdrawn by removing the wheel hub caps, the axle housing taking the entire load. The front axle is an I beam forging; a Stromberg carbureter with glass float

### New Radiator and Body Design Used—Fore-Door Bodies Are Fitted on Three Models

chamber is furnished; ignition is by a Splitdorf dual system; and rear springs are three-quarter elliptics with scroll ends. The wheelbase measures 114 inches; tires are 34 by 4 inches on quick-detachable rims; and the quipment includes gas headlights with generator, oil dash and tail lamps, horn, robe rail, etc.

The motor, clutch and gearset design is along previous Maxwell lines. The motor has separately cast cylinders, of T design, the intake valves on one side, the exhausts opposite and both interchangeable. These cylinders have integral waterjackets. Valve lifter rods are adjustable, through nut and locknut, the same as on high-priced cars. The lubrication is complete. A pump with a single delivery furnishes the splash in the crankcase base into which the connecting rods dip. On the dash is a single sight feed. The oiler capacity is 3 quarts.

Maxwell cars have always been cooled by thermo-syphon water circulation, and this is continued in the Special. The water

pipes to and from the waterjackets are of large diameter and are without sudden curves. The radiator capacity, together with that of the waterjackets, is 5 gallons. The gasoline tank capacity is 14.8 gallons.

The transmission system is in keeping with the motor. The multiple-disk clutch consists of alternate sets of steel disks rotating in oil, the oiler maintaining the supply. Three forward speed variations with direct drive on high are arranged for in the gearset which is a unit with the motor. Direct drive is on high speed. Between the gearset and rear axle the power is transferred through a propeller shaft with two universal joints. Carried on the rear axle are two sets of brakes, one internal, the other external, and both working against the same drum. The frame is a pressed steel one of channel section, front springs are semi-elliptic and steering is by worm gear mechanism.

But the entire 1912 Maxwell ammunition is not of the Special brand. There are three other models: The Mercury, the Mascotte and the Messenger. These names are used instead of meaningless letter and figure combinations. The Mercury is a four-cylinder roadster, the body of which has flush-sided doors, the new dash ventilators being added. Like the Special, it uses the new radiator design, and hood of corresponding lines. Demountable rims are fitted. The motor uses a high tension racing magneto and Stromberg carbureter.

The Mascotte, rated at 25-horsepower, is a roadster which is practically a continuation of the present model I. Its motor is a 4 by 4-inch size. Like the other models, it has the new radiator and hood design, has a ventilated foredoor body with control levers inside, irreversible worm and sector steering gear, springs of special English steel and is finished in dark blue with the wheels in battleship gray.

Lastly comes the Messenger model, the only two-cylinder car of the line. It uses the regulation combined motor, clutch and gearset that has been in vogue with the company for 5 years, during which time few if any changes have been made. It is a two-passenger runabout with one-piece hood. Foredoors are not used. Its standard color is dark blue with light blue wheels.

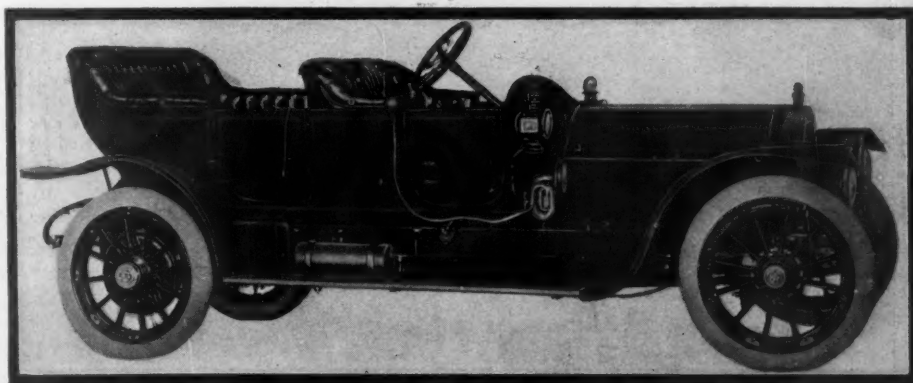


FIG. 9—THOMAS FIVE-PASSENGER CAR FOR 1912

# A Product of the 500-Mile Race

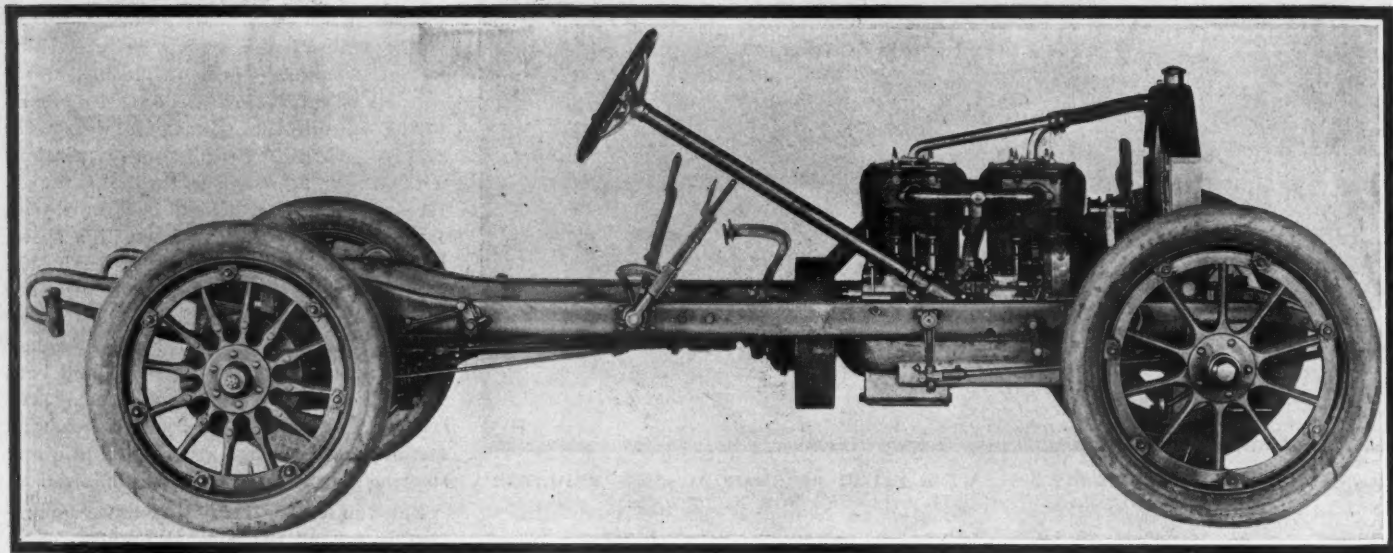


FIG. 1—SIDE VIEW OF STUTZ CHASSIS SHOWING STANDARD EQUIPMENT OF DEMOUNTABLE RIMS

THE running of the 500-mile international sweepstake race at Indianapolis this year was directly responsible for the organization of the Ideal Motor Car Co., Indianapolis, which has been incorporated to manufacture the Stutz car. The first of these cars was manufactured for this race, presumably with the object of demonstrating the Stutz combined rear axle and gearset. So successful was the car in the contest that it was decided to organize a company and begin manufacture. The Ideal Motor Car Co. is the outcome of these efforts and the Stutz car the product to be manufactured.

This car is best illustrated in Fig. 2, a plan view of the chassis, showing the employment of a four-cylinder T-head motor of Continental design with twin cylinder castings, the measurements for which are  $4\frac{1}{4}$ -inch bore and  $5\frac{1}{2}$ -inch stroke. Carried in the flywheel hub is a multiple-disk clutch, steel against steel

with the disks operating in oil. In rear of the clutch is the one universal joint in the system, and the propeller shaft is enclosed in a torsion tube T, this tube being supported at its forward end by a yoke Y which is trunnioned for support to a cross member of the frame. The torsion tube is free to move rotably in this yoke, thereby permitting either rear wheel to pass over obstacles. Reinforcing rods R connect from the torsion tube to the ends of the axle.

The unit rear axle system consists of the gearbox G formed integrally with the ring portion P constituting the driving-gear housing. To either side of this ring part is bolted a flange member P into which the axle sleeve S is secured. This axle housing is reinforced by two strut rods Z, one in front and in the rear of the axle. The car is made in one chassis size, the wheelbase of which is 120 inches, and the tire sizes 34 by  $4\frac{1}{2}$ , with de-

mountable rims. It will be sold as a four or five-passenger touring car, the body in either case being low slung, allowing a clearance of 10 inches.

The motor differs from not a few of the T-head type in that the cylinders are offset  $\frac{3}{4}$ -inch from the crankshaft axis, this offset reducing the angularity of the connecting rods on the explosion stroke. In the cylinder casting water jacket spaces surround the valve passages, and the water entering beneath the exhaust valve cages which is approximately the hottest portion of the casting. The pistons are designed for greater expansion at the top than at the bottom, being made .003-inch smaller in diameter at the upper end. They carry four oil grooves and four compression rings. The crankshaft and camshaft are ground to accuracy in the finishing process, and both are carried on Parsons white bronze bushings. The camshaft is removable endwise. Nickel steel

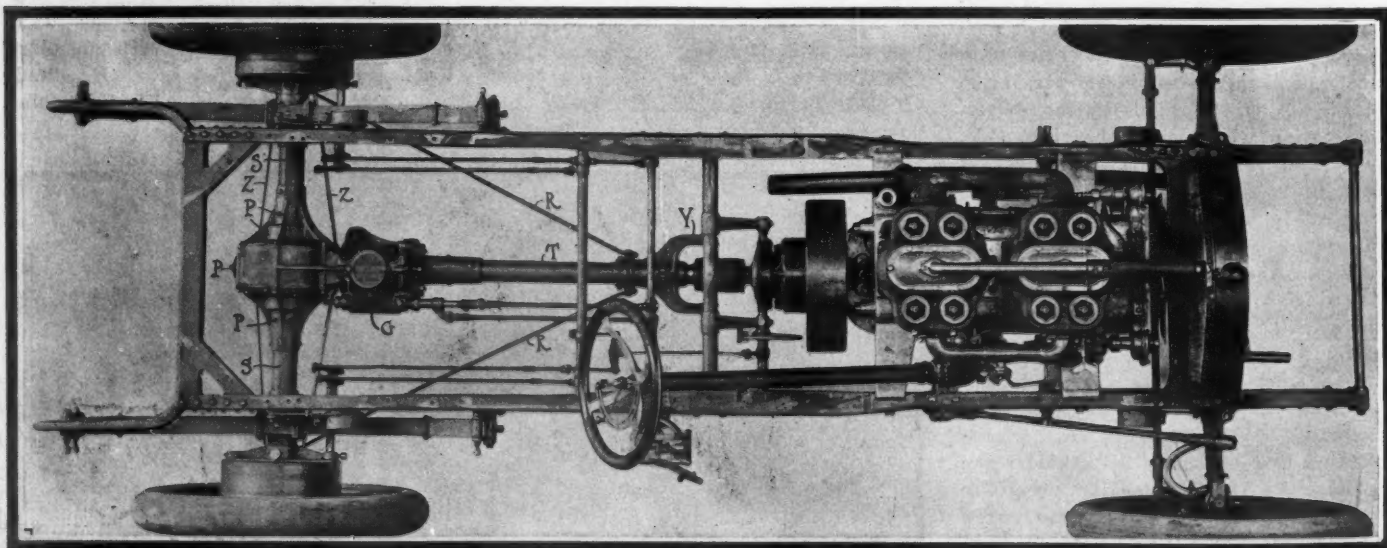


FIG. 2—PLAN OF STUTZ CHASSIS WITH INTEGRAL GEARSET AND REAR AXLE; ALSO TORSION TUBE T AND REINFORCING RODS R



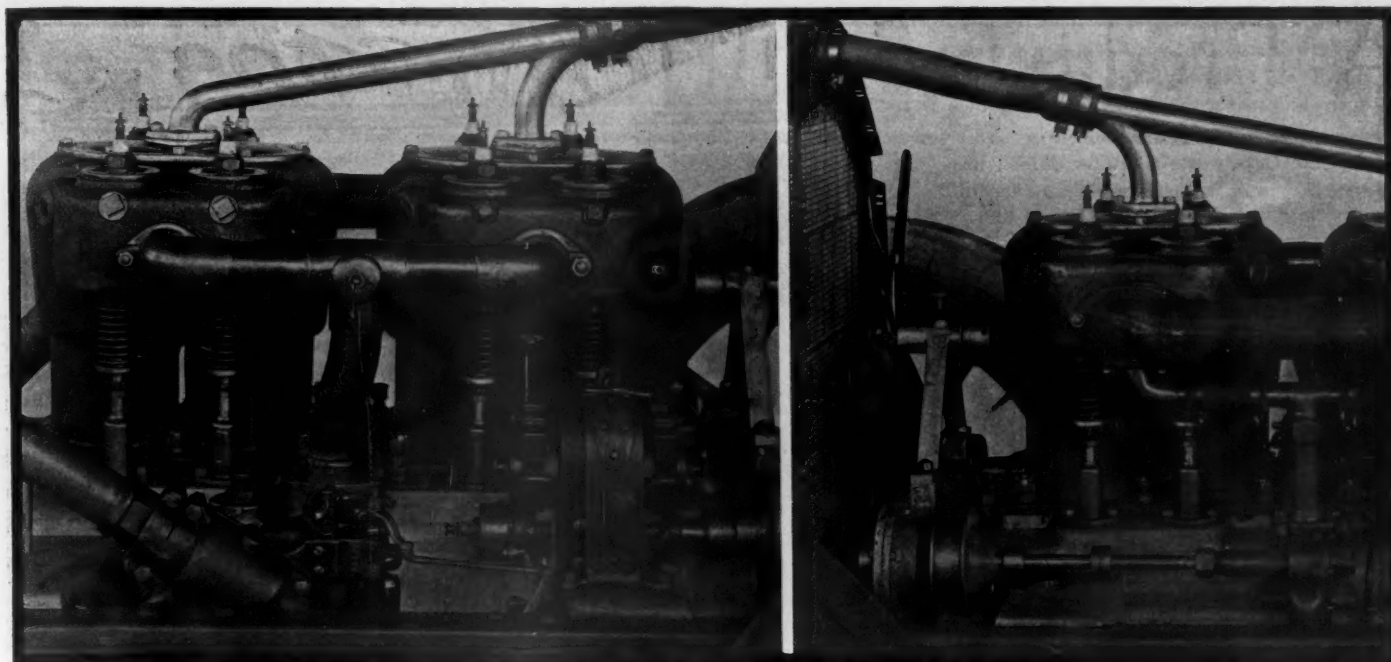


FIG. 3—BOTH SIDES OF CONTINENTAL DESIGN OF ENGINE USED ON STUTZ CARS

valves are employed on both intake and exhaust. They have a diameter of  $2\frac{1}{2}$  inches. A conventional design of crankcase is used, composed of aluminum castings consisting of upper and lower halves, the crankshaft bearings being supported entirely in the upper half. The connecting rod caps are secured by four bolts.

Ignition is with an Eisemann high-tension dual system in which is included a separate breaker box for use when the battery is employed so as to obviate the possibility of pitting the magneto breaker points. On the dash is a non-vibrating coil with push button for starting.

Lubrication of the motor is by means of a hollow crankshaft. The gear pump delivers oil through a copper tube to the main bearings, thence it passes through the hollow crankshaft to the lower bearings of the connecting rods. The overflow

from the rods maintains the splash level.

The carbureter fitted is a  $1\frac{1}{2}$  or  $1\frac{3}{4}$ -inch model L Schebler.

The rear axle system is the design of H. C. Stutz, who has employed this axle design for 4 years in different makes of cars. The axle housing details have already been referred to. The driveshafts from the differential of the rear wheels are  $1\frac{1}{2}$ -inch in diameter and made of chrome nickel steel. All shafts in conjunction with the axle are carried on annular ball bearings. The gearset is a selective type, giving three forward changes, and the gearshifting mechanism is located parallel with the torsion tube, so as to eliminate all possibility of gears being thrown out of mesh, due to the action of the rear springs. The gearshift lever is located on the right side of the car.

Incorporated with the back axle are the

two sets of expanding brakes, located side by side within brake drums which are 14 inches in diameter and  $4\frac{1}{2}$  inches wide. The front axle is a Timken I-beam design dropped between the steering knuckles and the spring seatings, and with very little drop between the springs. The steering arms and other forgings are  $3\frac{1}{2}$  per cent nickel steel.

The entire chassis parts are supported on a pressed steel frame, the side members of which are offset at the dash and dropped in front of the rear axle. The channel has a maximum depth of  $4\frac{1}{2}$  inches, with a  $2\frac{1}{2}$ -inch drop at the rear. The flange widths gradually increase from front and rear to the center, where the maximum width is 3 inches. Front springs are semi-elliptic and the rear ones are of the same design, connecting with long shepherd-crook type of spring horns.

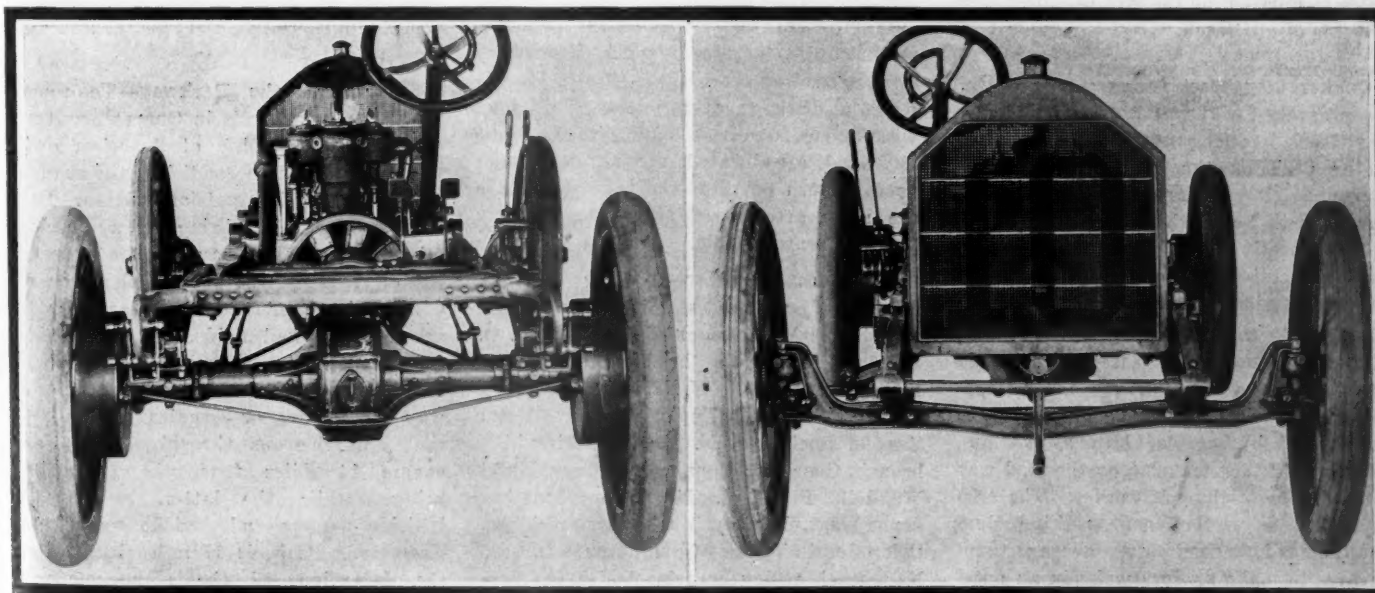


FIG. 4—REAR AND FRONT VIEWS OF THE STUTZ, WITH STUTZ REAR AXLE AND TIMKEN FRONT AXLE

**MEET at Point Breeze**—The Quaker City Motor Club will conduct a speed carnival on Saturday, July 29, at Point Breeze, and with the Remy brassard and trophy offered as the grand prize.

**Cadillac Organizes**—Cadillac, Mich., has formed a motor association with the following officers: Walter Kyser, president; Charles Haynes, vice-president; C. E. Miller, secretary; George Chapman, treasurer.

**Syracuse Will Mark Route**—The Automobile Club of Syracuse, Syracuse, N. Y., without waiting for clubs to organize in the northern section of the state, has planned to placard the route from Syracuse through to the Thousand Islands.

**Another Use for Car**—The religious work of the Y. M. C. A. department, Tacoma, have a novel way of reaching the Sunday afternoon crowd in various parts of the city, namely, by the motor car, the services being conducted from the seat of the car.

**Has a Novel Car**—William G. Irwin, president of the Indianapolis, Columbus and Southern Traction Co., has a novel private car. It is a seven-passenger motor car with flanged steel rims on the motor car wheels, permitting the machine to run over the tracks of the traction line. The car is equipped with telephone and signal lights.

**Trophy Given for Record**—The Buick won the Chancellor & Lyon trophy offered by that company, by making the trip from Vancouver, Wash., to Seattle, Wash., in 11 hours 30 minutes for the 186 miles. The Buick was driven by Roy Wilson, of Portland, and carried as passengers L. Therkelson, of the Oregon Good Roads Association.

**Syracuse Recruiting**—More than 100 new members have been secured for the Automobile Club of Syracuse, of Syracuse, N. Y., through the membership campaign started June 1. The contest ends September 1, when the club officers expect to have 1,000 members. There now are more than 750. F. E. Hudson secured the most recruits for June.

**Quaker City Meet**—Nine events are on the program for the fifth annual mid-summer track meeting of the Quaker City Motor Club on the 1-mile circular race course at Point Breeze next Saturday. Burman will be the bright particular star of the meeting. He will meet worthy rivals in Billy Knipper, Hughie Hughes, Harvey Ringler and others.

**Long Trip in Hupp Coupe**—C. H. Starrett, of Elgin, and two passengers recently tested the road capabilities of a Hupp mobile coupe by driving from Chicago to Minneapolis by way of Mankato, Minn. The total distance traveled on the road was something more than 500 miles. The trip required 3 days, the coupe making time over the road as good as the average tourist cares to make or does make in an open car. No trouble whatever was encountered. Through the hundred miles of Wis-

## From the



STEARNS-KNIGHT IN A ROAD TEST

consin hills only 4 gallons of gasoline were used, showing an average of 25 miles per gallon in a country of stiff climbs. The best day's record was 170 miles.

**Telling Them How**—Rigid regulations concerning the storage and use of gasoline will be incorporated in a new ordinance to be submitted to the common council of Janesville, Wis., at the suggestion of the state fire marshal. Garagekeepers are in favor of the measure, believing that prescriptions are necessary to give them an idea of how to make their places of business safe.

**Means Roads for Ohio**—The board of county commissioners of Franklin county, Ohio, has passed upon and approved road improvements within the county to the extent of \$214,000. One of the principal roads to be improved is the Harrisburg pike, extending from Grove City to Harrisburg, a distance of 6 miles. This road will be macadamized. Other roads to be improved are located in the north and northwestern parts of the county and are the main arteries of travel for tourists through central Ohio.

**T. C. A. Branches**—Touring Club of America's branches established July 1 are as follows: White mountains branch, F. O. Robinson, manager, the Mount Washington, Bretton woods N. H. Genesee valley branch, Bert Van Tuyle, manager, Hotel Seneca, Rochester, N. Y.; Berkshire hills branch, George C. Donahue, manager, Hotel Wendell, Pittsfield, Mass.; southeastern department, Le Roy Mark, vice-president, Colorado building, Washington, D. C.; Naugatuck valley branch, Wadso H. Warner, manager, Hotel Elton, Waterbury, Conn.; southeastern department, Maryland

branch, F. C. Latrobe, manager, Macht building, Baltimore, Md.; Connecticut valley branch, H. A. Brooks, manager, Hotel Kimball, Springfield, Mass.

**Interested in Beach Meet**—A touring party, comprising between seventy-five and 100 cars, is being planned by north Texas enthusiasts on the occasion of the beach races at Galveston August 3, 4 and 5. George W. Baker, of Dallas, president of the Texas State Automobile Association, has just completed a pathfinding trip from Dallas to Galveston, and he will likely conduct the big touring party to Galveston, leaving Dallas August 1. Much interest is being shown all over Texas in the approaching race meet on the beach, and cars are being entered from Houston, San Antonio, Dallas, Fort Worth and other leading cities.

**To Extend the Parkway**—To remove the ban put on roads in Queens county by the Automobile Club of America, owing to their impassible condition, the management of the Long Island Motor Parkway has decided to bring the western terminus of that highway 5 miles nearer to the city. This will obviate the necessity of traveling over roads which are as rough as newly plowed fields. At present the entrance to the parkway is at Great Neck. This is reached from New York either by way of Flushing or Jamaica. The former route, which runs through Little Neck, covers 14 miles from the Queensboro bridge, while the latter, by way of Hillside avenue and Jericho turnpike to New Hyde Park, is 17 miles long. It is the intention of the management to extend the parkway in a westerly direction toward Hillside avenue. This latter



# Four Winds



STEARNS-KNIGHT PASSING TAVERN BUILT IN 1794

point will shorten the route some 5 miles, avoiding detours, and will bring what will be called the Rocky Hill Road Lodge to within a quarter of a mile of Hillside avenue.

**James Fortesque Ill**—Secretary James Fortesque, of the Massachusetts State A. A., has been seriously ill for the past few weeks and his friends have become alarmed over his condition. He worked hard to get the light bill passed and was worn out so that when the hot wave came along he fell a victim to it.

**Burman Challenges Bordino**—E. A. Moross has issued a challenge to the Fiat Import Co. to match Burman and the Blitzen Benz against Bordino and the 300-horsepower Fiat which at present is in England. Moross wants a race of from 5 to 100 miles, and suggests Brighton Beach, Syracuse, St. Paul, Detroit, Indianapolis or Los Angeles as the meeting place. The Fiat will be in this country early in September and probably will be driven by David Bruce-Brown. It is planned to send it to Florida after records.

**On a Prohibition Tour**—One of the most unique tours ever undertaken was started from Boston last Saturday, when a party known as the Flying Squadron left for Maine to work for prohibition in that state. In the party were President J. B. Lewis, of the twentieth century pledge-signing crusade; Professor John A. Nichols, of Brighton; David Reid, a cornetist, and the chauffeur. They went in Mr. Lewis' motor car and headed for Kittery, Me., the first town people go through on entering the state. There they held a meeting Saturday afternoon. All the big cities and summer resorts of the state will be visited and

efforts will be made to secure signatures in behalf of temperance. The tour is undertaken to arouse interest in the coming campaign in Maine, when the question of prohibition will be settled at the polls.

**Canadian Statistics**—Nearly double the number of permits for motor cars were issued in the province of Ontario last year over 1909, according to a report issued by the provincial registrar for the year October 31, 1910. For 1,077 cars owned within the province and 2,253 outside, 4,130 permits were issued. In 1909 2,452 permits were given out.

**Maryland Merger Proposed**—There is a strong likelihood that the Maryland Motor Cycle Club will affiliate with the Automobile Club of Maryland. The club has appointed a committee to draw up the proper affiliation proposition. The matter has already been discussed with President H. M. Rowe, who informed the motor cyclists that his club would be pleased to consider anything that they might suggest.

**Trying Out Stearns-Knight**—Driving from Cleveland, Ohio, to Pittsburg, Bedford Springs, Harrisburg and Gettysburg, Pa., thence to Cumberland, Md., and back to Cleveland, one of the new Stearns-Knight models recently completed one of the most strenuous mountain runs ever attempted. During the 3 days the car covered over 795 miles, 580 of which was mountain running. Five men and 400 pounds of luggage and camping materials made up the load. No attempt was made to break speed records—the object of the trip was to test and prove the car and engine. Over 18 miles an hour was averaged straight through the mountains, including the sin-

gle stop for tires made on the entire trip. This one puncture was the only stop on the entire trip aside from filling the gasoline tank, etc.

**Picnic Scheduled**—The first annual picnic of the McLean County Automobile Club, of Bloomington, Ill., has been set for August 10 at Mackinaw Dells, a resort on the Mackinaw river 20 miles northwest of Bloomington. In addition to the picnic there will be a hill-climbing contest during the afternoon.

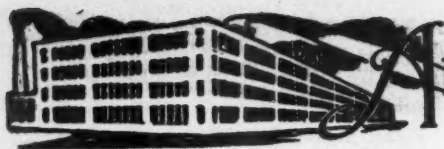
**Club at Petoskey**—The owners of Petoskey, Mich., have organized the Petoskey Automobile Club. The following officers have been elected: President, J. L. A. Galaster; vice-president, Guy C. Hankey; secretary, Homer Sly; treasurer, C. E. Churchill; directors: D. Charles Levinson, Clare Harding and W. S. Mesick.

**Signboarding Ohio**—The Columbus Automobile Club is making preparations to erect a number of road signs in central Ohio. The road signs will be both of the danger and direction variety, and will be erected on all of the leading highways. The plan is to co-operate with the clubs of Zanesville, Springfield, Kenton, Dayton, Cleveland and other cities to cover the entire state with signs.

**Climb for Cincinnati**—The date for the Cincinnati Automobile Dealers' Association hill-climb on Stanley avenue, Cincinnati, has been definitely fixed for Saturday, July 29. The course, as laid out, is about ½ mile long, with grades varying from 5 to 11 per cent. The route constitutes a natural amphitheater, giving the spectators a clear view of the complete course, while from the drivers' standpoint the road is ideal.

**Stars for Syracuse**—C. Arthur Benjamin, president of the Syracuse Automobile Dealers' Association, has contracted with E. A. Moross for the appearance at the state fair meet at Syracuse, N. Y., September 16, of five noted stars. These include Burman, Knipper, Ralph de Palma, Patschke and Louis Disbrow. President Benjamin is negotiating with Chairman Butler, of the contest board of the A. A. A., for a 5-mile national championship race. Another classic will be the Remy brassard and trophy.

**Convenient Maps for Motorists**—Eight new map sections, covering the most popular touring districts of America, and which have been compiled under the auspices of the Touring Club of America, are now being distributed among members of the club and other motorists. These maps include in their respective sections, New England, showing all the popular touring routes through Massachusetts, Connecticut, Vermont, New Hampshire and Rhode Island; Maine, with the best routes to Canada; New York, with a section of Canada; New Jersey and Pennsylvania, the middle West, southeastern part of the country and the southern states. The maps are compiled on a scale of 2 miles to the inch.



# Among the Makers and Dealers

**NEW Rambler Engineer**—F. C. Moek, formerly assistant engineer for the Stoddard-Dayton and later chief engineer for the Royal Tourist Motor Co., has joined the engineering force of the Thomas B. Jeffery Co.

**Absorbs Electric Company**—The General Electric Co., of Schenectady, N. Y., has absorbed the Fort Wayne Electric Co., of Madison, Wis. The New York company has filed articles in Wisconsin, showing its local interest to be \$261,000. Its capital is \$65,000,000.

**Buick Working on 1912 Models**—The Buick Motor Co. is engaged in the production of 1912 models. While not all of the departments of the plant are working on the new models, the production of the 1912 cars is well under way, and it is expected that deliveries will be made by the first of August.

**Paterson Busy on 1911 Orders**—It has been announced by the W. A. Paterson company that work on the 1912 models will not be started until about the first of September because of the large number of orders for the 1911 cars which remain unfilled. The plant is being operated at its full capacity.

**Increases Capital**—The Waukesha Motor Co., of Waukesha, Wis., has increased its capital from \$100,000 to \$200,000 in order to care for the increasing business. C. A. Haertel is president and Harry L. Horning is secretary of the company, which furnishes a number of large motor car manufacturers with engines.

**King Will Expand**—The King Motor Car Co., of Detroit, which has 22 acres of land in the Jefferson avenue district and already has a factory building that is busy turning out cars, will soon break ground for an extensive addition. The firm has enlarged its orders for material and expects to build 3,000 cars of the 1912 model.

**Pullman's Export Business**—The Pullman Motor Car Co. added further to its export business last week when a five-car shipment was made to Sidney, Australia. Other foreign shipments during the week went to Buenos Aires, Montevideo and Juncos, Porto Rico. R. Gonzales, the Pullman representative in the latter city, has disposed of fourteen Pullmans since February 10, 1911.

**Chauffeurs' Strike in Pittsburgh**—The Excelsior Express and Standard Cab Co., of Pittsburgh, was shut off from service last week because of a strike among its twenty-four chauffeurs. The drivers claim that they are paid \$2 a day. Out of this they say they have to pay \$17.50 for uniforms, \$20 for an overcoat and \$2.75 for a duster. They also kicked because they are docked while waiting in the shops for

a call and because they have to pay for breakage to their machines and for bills which unscrupulous customers neglect to settle, all out of their meager wages.

**New Zealand Buying Cars**—Canadian trade with New Zealand is increasing. Exports to that country from Canada during the past fiscal year totaled \$1,404,525, an increase of over \$400,000. One Canadian firm has sold 320 motor cars there this year.

**New Flanders Electric Out**—The new Flanders electric has been tested and three of the cars now are completed and on exhibition in the company's show room in Pontiac, Mich. Work on the new car is being pushed rapidly, but it will be 60 days before they are ready for shipment.

**Bigelow Interested**—Frank G. Bigelow, former president of the First National Bank and ex-president of the American Bankers' Association, has purchased an interest in the Stephenson Motor Truck Co., Pabst building, Milwaukee, manufacturing Utility trucks at South Milwaukee. Mr. Bigelow will have charge of the offices and has been elected treasurer.

**First Truck Turned Out**—The Packers Automobile Truck Co., which recently moved from Pittsburg to Wheeling, W. Va., where it is building a good-sized plant, turned out its first machine last week. It is a 2-ton truck with a 30 horsepower, four-cylinder engine. Albert M. Schenk, treasurer of the F. Schenk & Sons Packing Co., of Wheeling, is president, and W. T. Shafer, of Wheeling, is secretary.

**Medal for Benz Company**—The Benz Auto Import Co. of America has been informed by its home company, Benzwerke-Gaggenau, the manufacturer of the Benz-Gaggenau trucks, that the king of Prussia on May 30, 1911, bestowed upon the Benz company the state medals in gold for industrial services, in consideration of the excellent service the Benz-Gaggenau trucks gave the government during the military winter exercises held in Riesengebirge, which are known as the roughest and steepest hills in Germany.

**Cole Will Have New Plant**—During a recent meeting of representatives of the Cole Motor Car Co. in Indianapolis it was announced the concern would soon have a new factory, to be one of the most modern in the country. The company has now bought the property it occupies at Washington and Davidson streets and extending north to Market street. A four-story steel and concrete building facing Market street and joining the Washington street building will be built at once at a cost of about \$60,000. The site cost \$150,000. The new building will be used to relieve

some of the departments in the Washington street building and also to house the body finishing department now in a separate building in West Maryland street.

**Have a Big Garage**—H. H. Townsend & Co., of Leipsic, Ohio, have a new garage with 8,000 square feet of floor space. The building contains machine shop, stock room and salesroom, and the company represents the Ford, E-M-F and Flanders.

**Pearce With Colby**—W. H. Pearce, formerly with the Fal Motor Co., has joined the forces of the Colby Motor Co. at Mason City, Ia., and will take immediate charge of the fleet of Colby racing cars this season. Entries will be made in many of the national and other events, beginning with the Elgin races.

**Goodyear Banquet**—The office force and heads of the various departments of the Goodyear Tire and Rubber Co., of Akron, O., enjoyed a banquet at Young's hotel recently. Edward Hall acted as toastmaster and those who responded to toasts were Edward Kohle, assistant superintendent; H. S. Schultz, Harry Boyer, Edward Hall, Ralph W. Stoddard, Joseph Brown, William Stevens, O. W. Myers, H. C. Moore, M. S. Heminger and others.

**Havers Will Increase Capital**—It has been stated that orders for approximately 280 cars, or nearly \$500,000 of gross business, has been placed with the Havers Motor Car Co., of Port Huron, Mich., for the past few days, and plans are now being formulated to immediately increase the capital of the company and the capacity of the plant. Several offers of large amounts of outside capital have been made but have been rejected, as the present stockholders prefer to keep the enterprise strictly a Port Huron industry.

**McCue Gets Western Factory**—The McCue Co., of Hartford, Conn., announces that it has decided to consolidate interests with the Superior Axle and Forge Co., of Buffalo, and that the factory of the new company, which will be known as the McCue Co., will be located at 1700 Elm street, Buffalo. The president and general manager of the merged interests will be C. T. McCue; J. W. Lansing will be vice-president and treasurer; B. H. Bean, secretary, and H. T. Dall, assistant secretary and treasurer. The McCue Co. was organized under the laws of the state of Connecticut, December 16, 1904. The Superior company was organized last year and began operations last January. The McCue company has been manufacturing motor cars at its Hartford factory, and the new Buffalo location will give it a western factory and additional equipment to answer the demands of increasing business for axles, forgings and other motor



car parts. Many Hartford citizens are stockholders of the McCue company, and some of Buffalo's merchants and manufacturers are also stockholders. The incorporators are C. T. McCue, of Hartford; H. A. Kamer, H. H. Dean, Ira T. Gleason and J. W. Lansing, of Buffalo.

**Closing for Inventory**—Factory Manager H. H. M. Bassett, of the Weston-Mott Co., of Flint, Mich., stated that the plant will be closed from July 31 to August 5, while inventory is being taken. At present the concern is manufacturing axles and hubs for 1912 models, although some work on 1911 models is being done.

**Franklin Considering Building**—The H. H. Franklin Mfg. Co. is considering the erection of a new building at Syracuse this fall as an extension to its large industry. It is not decided definitely to build, but Mr. Franklin states that the work may be started very soon, or at any rate, probably next year. It was announced some time ago that the company would duplicate its last large building. The concern owns a considerable acreage of vacant realty adjoining its present buildings.

**Ford's Prize Dealer**—C. L. Herring, of Des Moines, Ia., has sold more Ford cars this season than any agent of that company. Up to last week Mr. Herring had sold 1,009 cars since the season opened and had been advised by the factory that he was the high man in the country. Mr. Herring has an office in Council Bluffs and one in Atlantic in addition to his Des Moines office. According to the records of the Iowa secretary of state's office, there have been more than two Fords sold to any other car in Iowa this season.

**Big Show at State Fair**—The motor show to be held in connection with the annual Wisconsin state fair at Milwaukee, September 4 to 9, will be housed in a new concrete building, 450 by 200 feet in size. It is absolutely fireproof and not a particle of wood enters into its construction. It is the first time that a complete motor show is held by the state board of agriculture, although each year a number of dealers and manufacturers have exhibited cars on the grounds. R. W. Rowlands, secretary of the board, has opened

offices in the administration building and all business will be transacted from the grounds instead of from Madison, the capital.

**In New Factory**—The Four-Wheel Drive Auto Co., of Clintonville, Wis., has moved into its new factory, costing \$45,000. The company has been occupying temporary quarters and turning out only a few cars, and the production will now be greatly increased. The company is backed by business men of Antigo, Clintonville and Appleton.

**Now Marathon Motor Works**—At a recent stockholders' meeting of the Southern Motor Works, maker of the Marathon car, the capital stock was increased to \$600,000 to take care of the rapidly growing business. The corporation name was also changed to Marathon Motor Works in order that the company would be more closely identified with the car.

**Good Crops in Illinois**—July was reported to be a quiet month among most of the dealers of McLean county, Illinois. Farmers have been very busy harvesting their oats and have had little time to give any thought to motoring. The oats crop is turning out much better than anticipated a month ago, and this has created a more optimistic tone. Timely rains also have saved the corn crop, and this means prosperity for central Illinois farmers, with a corresponding increase in the number of sales. Dealers, as a result, look for a heavy business in cars as soon as the corn crop is by.

**Car Used for Cutting Grass**—Harry Payne Whitney, the New York millionaire, who has a summer home on October mountain, in the Berkshires of western Massachusetts, found last week that the hay crop was so large because of the hot weather and needed to be harvested quickly and that the regular machines could not do the work. So he sent one of his high-powered motor cars to the place to run the mowing machine and it has proven a big success. It is cutting more grass in one day than a span of horses can cut in 3 days. About 500 acres are cut over to get fodder for the stock, and some of the other rich people there who saw how Mr.

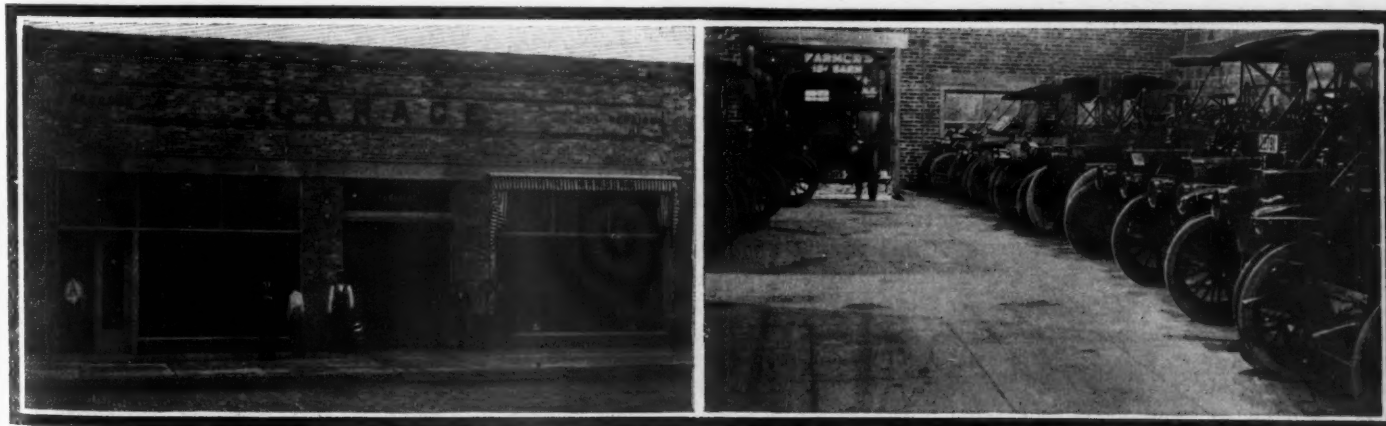
Whitney solved the problem of quick harvesting have discontinued some of their pleasure rides while their motor cars are being worked on the farm for a few days cutting grass.

**Australians Order Empires**—The Empire Motor Car Co., of Indianapolis, has received two orders by cablegram from its Australian agents. One of these orders calls for immediate shipment of ten Empires by way of Vancouver and the other of six by way of New York. When these two shipments arrive in Australia there will be in all over half a hundred Empire cars in use throughout Australian territory.

**Files a Mortgage**—The Duplex-Power Car Co., of Charlotte, Mich., has filed a mortgage on all its property. The mortgage runs to Farlin H. G. Ball, of Oak Park, Ill., and is given to secure Calvin H. Hill, of Chicago, and Louis Lunsford, of Muskegon, Mich., for loans to the company. Mr. Hill, so the mortgage stated, loaned the company \$6,000 and Mr. Lunsford loaned \$3,700. The loans are past due and unpaid, including interest.

**Building a Huge Garage**—The Milwaukee Electric Railway and Light Co., which has eight Johnson motor trucks and a number of other cars, has commenced work on remodeling the former Broadway power house, near Mason street, adjoining the Thomas B. Jeffery Co.'s Milwaukee branch, into a garage, which will be the largest private garage in the middle west. The company is now using motor trucks for repair work exclusively.

**Big Dividend Declared**—A dividend of 100 per cent was declared at the annual meeting of stockholders of the Atlas Drop Forge Co., of Lansing, Mich., when the capitalization was increased from \$100,000 to twice that amount. Business was said to be flourishing last year. A board of directors and officers were elected as follows: President, R. E. Olds; vice-president, R. H. Scott; secretary and manager, S. H. Carpenter; J. H. Moores, Ray O. Potter, H. A. Haze, all of Lansing, and Bruce McPherson, of Howell, the only new member of the board, who was elected to take the place of E. F. Peer.



EXTERIOR AND INTERIOR OF H. H. TOWNSEND & CO., OF LEIPSIC, OHIO.

# The Motor Car Repair Shop

**E**QUIPMENT and system are two of the most important essentials of the motor car repair shop. Add to these a good foreman and the shop will do a thriving business. By equipment is meant up-to-date facilities for removing motor car bodies and mud pans, for taking motors out of chassis frames, for conveniently supporting motors, gearsets and rear axles while being dismantled or assembled, for conveniently and thoroughly cleaning all motor car parts, for performing those jobs requiring special tools or treatment, and for promoting the health, good will and consequent efficiency of the workmen at all times.

By system is meant modern means of keeping an accurate account of all the labor required to do first-class work and the cost of it, so that the owner will get a reasonable something for his money; of keeping \$5 men at \$5 work and not requiring them to do things that a \$1 boy can do just as well; of preventing waste of all kinds and properly charging for all materials and parts used in making a first-class repair; and of giving every car that has been worked upon in the shop a thorough examination to see that all nuts and studs are properly tightened, all adjustments in good order, all car equipment properly replaced.

A good foreman is one who not only knows how to do things of a mechanical nature, but who can keep the shop organization tuned up to its highest pitch; who is capable of keeping his equipment up-to-date and in good order; who is ever on the lookout for a means of improving the system, or at least preventing it from lagging and becoming congested; who does not promise a car for Wednesday, put the owner off until Friday, then keep his men overtime on Saturday in order that the job may be slapped together for Sunday.

## Important Factors Neglected

A visit through many of the repair shops throughout the country reveals the fact that the two above mentioned essentials of the motor car repair shop are greatly neglected; and it is this neglect that has led a great majority of the motoring public to regard the average motor car repair shop as a place to be shunned, except in cases of absolute necessity. As a result, motorists often neglect having little troubles brought to the attention of the repairman until consequent greater troubles develop, and not only does the motorist and motor car dealer and repairer suffer, but the reputation of the manufacturer is given a black eye as well. It is to eliminate much of this trouble that the larger manufacturers go to considerable expense to erect service buildings in the larger cities throughout the country. These build-

## Hints to the Amateur

ings are veritable branch factories, where the facilities for taking the proper care of their own products are equal and sometimes even better than those of the factory itself.

The motor car is reaching, and in many constructions has reached, a degree of standardization that enables the dealer to equip his repair department at a reasonable expense, in such a manner that first-class repairs can be made therein; and a little skill in the choice of workmen and system in the handling of repairs is all that is required to make the repair department a profitable one to all concerned.

### Final Inspection Necessary

A simple example will serve to show the importance of a thorough examination of a car before it is permitted to leave the shop: A short time ago, a car having

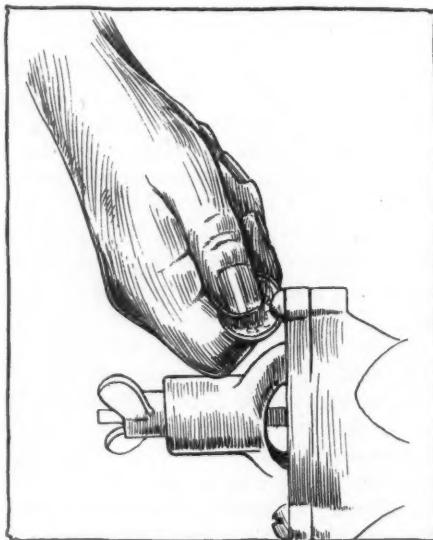


FIG. 1—DIME AS SCREW DRIVER

ignition trouble was sent to the agent of the manufacturer of the ignition system. When the car was reported to be again in good running order, the owner called for it and before he had gotten away from the shop he noticed that the foot accelerator had been disconnected. Half an hour of the owner's time was lost waiting for the foot accelerator to be fixed, and another start made. Hardly a block away from the shop an effort was made to open the cutout so that the exhaust might be heard, and the cutout would not work.

Arriving at his garage, an examination of the cutout control mechanism disclosed the fact that the cutout cable had been cut presumably for the purpose of facilitating the repair of the ignition system, or perhaps to prevent it from coming in contact with the wiring. Having repaired the cutout cable and wondering what next,

the owner went to his dinner. After dinner the family climbed into the car and started out for a ride. A half hour's ride brought the party out into the parks, where darkness overtook them. The usual turn of the electric light switch brought forth no welcome rays of light from the lamps, and the subsequent examination of the battery box showed that both the lighting wires had been carefully disconnected and tucked away in one corner. To connect them was a small matter and immediately upon making contact with the second of the lighting wires, the motor, which had been running steadily, ceased to operate and remained quite as still as the darkness that prevailed before the lighting wires were connected. Though a strenuous effort was made to again start the motor, it seemed perfectly lifeless until the light wires again were disconnected, whereupon up started the motor without so much as touching the crank.

Crawling home under the faint illumination of a set of kerosene lamps was all that was necessary to cause the indignation of this owner to surge up almost to the overflowing. The next day the car was returned to the repairman and a gentle but firm request made to have the car put in good condition.

### A Handy Screw Driver

It often happens that for want of a screwdriver the motorist is in a precarious position and experiences much trouble in making an adjustment or in loosening the screw which would give no trouble whatever were a screwdriver on hand. In such cases the desired results generally can be obtained by the use of a silver dime, as shown in Fig. 1, which is most apt to be found in the pockets of one of the passengers. A dime also often can be used as a screwdriver for loosening screws which occupy a position that cannot be conveniently reached with the ordinary screwdriver. Carbureters often occupy just such positions. In the illustration shown herewith, for instance, the operator is using a dime to loosen the air valve of a carbureter. The carbureter is so situated that an ordinary screwdriver could not be used, and even the right-angle screwdriver to be found in the kits of many repairmen could be used only with considerable difficulty. Another place where the dime can be advantageously used as a screwdriver is on the coil which is tucked away under the hood of a shrouded dash. There are cases where it is necessary to almost entirely remove the entire coil to remove a unit; and where, if an effort is made to remove the blade spring containing the platinum point, without removing the entire unit from the box, a special form of short, stubby or angular screwdriver is required.



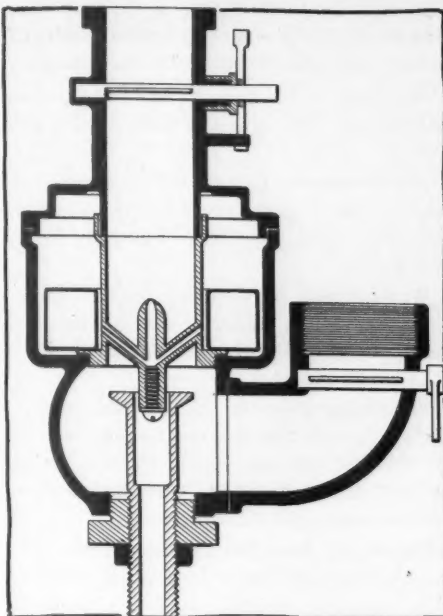
# Current Motor Car Patents

## MOTOR CAR SIGNALING DEVICE—

No. 998,356, dated July 18; to Antone Lehrer, Auburndale, Wis.—As illustrated, this patent relates to the combination with a vehicle body of brackets having underlying arms, secured to the opposite ends of the vehicle body, of a lantern at each end of the vehicle, each provided with oppositely extending shafts, rotatively engaging the arms of these respective brackets for rotably supporting the lantern, springs connecting the opposite sides of the lantern with the bracket, pulleys connected to the lower shafts carried by the lantern, a cable engaging the pulleys, a bellerank lever connected with the cable, and a treadle pivotally connected with the bellerank lever and vertically movable within the vehicle body for the purpose of rotating the lantern.

**Weather Screens for Vehicles**—No. 998,320, dated July 18; to Arthur Collins Auster, Birmingham, England—This patent pertains to a weather screen for the back seat of open vehicles, and comprises a transversely disposed screen element and a pair of horizontally extensible supporting arms therefor, each arm being self-sustaining in a horizontal plane and embodying sections which are mutually associated for relative movement, a connection between one of the sections of each arm and screen element, the connection including a vertical pivot for the arms, a horizontal pivot for the screen element and means for locking the latter at different positions on its horizontal pivot and a vertical pivot connection between the other section of each arm and a stationary support.

**New Simple Carburetor**—No. 998,457, dated July 18; to Herbert Bingham, Lakewood, Ohio—This patent applies to a carburetor illustrated herewith having a fuel



BINGHAM CARBURETOR DESIGN

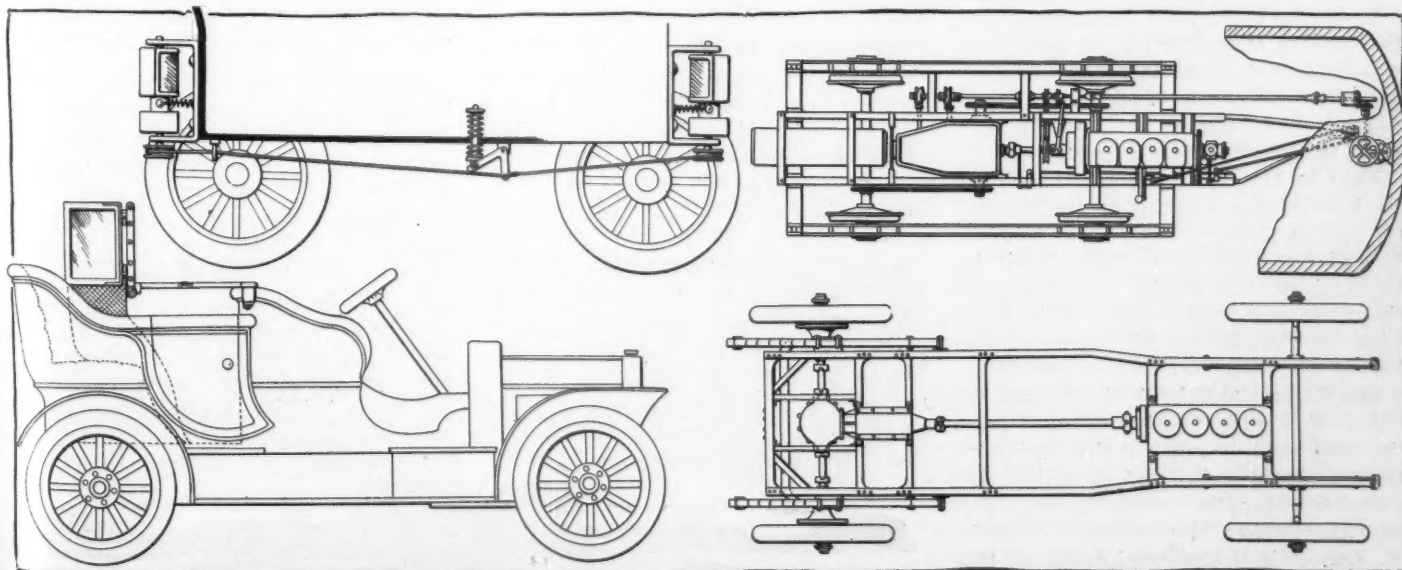
chamber, an outlet passage extending upwardly from the fuel chamber, a carbureting chamber forming a continuation for the outlet passage, a valve disposed within and adapted to close the outlet passage, independent conduits communicating with the fuel chamber, one communicating with the carburetor chamber and the other with the outlet passage above the valve, and means to independently regulate the passages through the conduit.

**New Motor Car Construction**—No. 997,075, dated July 18; to Charles William Duer, Chicago—This patent relates to a combination in a motor car of a chassis, the power and actuating mechanism arranged thereon in two exclusive units, one of which is located at the front and comprises chiefly the engine, and the other

located at the rear comprises similarly the transmission and driving gear. The universally-jointed shaft connects these units, the intervening space being otherwise clear. A continuous non-rotating main axle is located beneath the rear part of the chassis and the driving wheels are journaled on the ends of this axle. A pair of universally jointed shafts connect the driving gear with the hubs of the wheel, and cushioning springs are interposed between the chassis and main axle.

**Motor Railway Car**—No. 998,179, dated July 18; to William S. Hovey and Charles B. Stebbins, Three Rivers, Mich.—This patent applies to a combination with the traction wheels of a running gear frame, comprising a pair of longitudinal sills, a cross piece having a yoke-like central drop therein, a pair of inner longitudinal sills mounted upon this cross piece, one at each side of the central drop thereof, an engine mounted on and arranged between the inner longitudinal sills at the forward end thereof above the forward cross piece, the crankshaft of which being arranged longitudinally; a transmission comprising the transmission gearcase mounted on and arranged between the inner longitudinal sills at the rear of the engine, a driven shaft arranged transversely of the transmission gear casing and driving connection between the ends of these shafts and the traction wheels of the vehicle.

**Schaefer Spark Plug Design**—No. 995,969, dated June 20; to Joseph E. Schaefer, Jr., Detroit, Mich.—The spark plug to which this patent relates is not illustrated herewith. It is conventional in design except in that a series of adjustable screws or contacts are mounted in the lower end of the spark-plug casing in the same plane with the disk on the lower end of the insulated or central electrode.



COLLINS WEATHER SCREENS; LEHRER SIGNALING DEVICE; MOTOR RAILWAY CAR; DUER CAR CONSTRUCTION

## Brief Business Announcements

**CLEVELAND, O.**—W. J. Kreuder, formerly of the Goodyear Tire Co., is now general superintendent of the Swinehart factory.

**San Francisco, Cal.**—H. M. Wolter has secured the agency for the Lambert car in California, with headquarters in San Francisco.

**Appleton, Wis.**—Elmer Bleick, of Appleton, and A. F. Schroeger, of Detroit, have purchased the Walter Auto Co., of Appleton, Wis.

**Chicago**—The Paterson now is being handled locally by the W. A. Paterson Co., which is located at 1470 Michigan avenue. It has five states.

**New York**—W. A. Sellon has severed his connection with the sales department of the E. R. Thomas Motor Car Co. and joined the sales department of C. R. Teaboldt & Co.

**New York**—The Marquette Motor Co., of Saginaw, Mich., has established a branch in New York city at 1808 Broadway, at the southeast corner of Fifty-ninth street.

**Green Bay, Wis.**—The West Side Garage Co. has moved into its new garage on North Broadway. It is 100 by 45 feet in size. There are three large repair pits and two turntables.

**Minneapolis, Minn.**—George B. Levy, formerly of Chicago, has been given the agency for the Hudson in Minneapolis and forty-two counties in Minnesota. The agency is temporarily located at 832 Hennepin avenue.

**Albany, N. Y.**—The Electric Omnibus Co., of Block Island, has increased its capital from \$1,000 to \$100,000. The directors are Seldon E. Marvin, of Albany, and H. L. Van Zile, Frank Chrysler and C. J. Field.

**Hartford, Conn.**—The local branch of the Packard Motor Car Co., of New York, will be moved from its present location on Allyn street to 294-6 Pearl street, where a new building has been built to meet the demands of the company.

**Fond du Lac, Wis.**—The Helmer Milling Co. is building a fireproof garage opposite its milling plant, to be 115 feet long, 45 feet wide and two stories high. It will be both private and public. By January 1 the company expects to do all of its work with motor trucks and will use about one-half of the garage for its own purposes.

**San Francisco, Cal.**—A. D. Plugoff, of the J. W. Leavitt Co., has returned from the east, where he renewed the firm's contract as Pacific coast and Hawaiian representative for the Overland car. The Leavitt company also retains the northern California, Nevada and northwest territory for the Kisselkar. This company

also will establish a new branch at Los Angeles, Cal., giving the firm a chain of houses throughout the entire Pacific coast.

**Montreal**—The Russell Motor Car Co. has opened its new quarters at 5 Park avenue.

**San Francisco, Cal.**—S. G. Chapman has secured the local territory for the Hudson, formerly held by the Pioneer Automobile Co.

**Washington, D. C.**—The Carter Motor Car Corporation, maker of the Washington car, has opened a branch store at 1625 Fourteenth street.

**Creighton, Neb.**—R. M. Peyton is preparing ground for the erection of the 50 by 100-foot garage which he will build on East Main street for Charles and Gus Hoferer and John Cooper.

**Tarentum, Pa.**—The Valley Motor Co. has let contracts for a three-story garage, with complete equipment, for a modern machine shop. It has one of the best locations up the Allegheny valley.

**New York**—The Louis J. Bergdoll Co., of Philadelphia, will open a New York office during the coming week at 1928 Broadway. The new branch will be under the supervision of A. N. Schwartz, general manager and treasurer of the company.

**Gloversville, N. Y.**—Wells & Morse, agents for the Cole, are moving from South William street into their new garage opposite the Schriver property on North Perry street. The new building is 48 by 56.

**Louisville, Ky.**—The Willand Co., with a capital stock of \$6,000, divided into shares of \$50 each, filed articles of incorporation. The concern will sell motor cars. The maximum indebtedness is fixed at \$6,000. The incorporators are T. J. Willand, William P. Hines and George Reese.

**Philadelphia, Pa.**—The new building of the Locomobile company, now in course of erection at Twenty-third and Market streets, will be finished and ready for occupancy by September 1, at or about which time the company will remove from their present headquarters, 245 North Broad street.

**Boston, Mass.**—There has been a change in the agency for the Hudson car in the Hub. The Whitten-Gilmore Co., agent for the Chalmers, has been handling the Hudson since it was put on the market, but now a new firm, comprising A. B. Henley and G. B. Kimball, has taken it over. Mr. Henley formerly managed the

Franklin branch in Boston, but recently he was with the Whitten-Gilmore Co. as manager of its truck department.

**San Francisco, Cal.**—L. J. Borie has secured the agency for the Metz car in San Francisco and vicinity and is located at 151 Sutter street.

**Seattle, Wash.**—Burke & Farrar have let the contract for a \$28,000 garage to be constructed on Eighth avenue between Pine and Pike streets.

**Columbus, O.**—Roy O. Williams has been named receiver for the Columbus Taxicab and Auto Service Co., upon the application of the Capital City Rubber Co., which avers the concern to be insolvent.

**Des Moines, Ia.**—The Studebaker company announces that a state branch will be located in Des Moines. C. F. Stewart, who has been special representative for the Studebakers, will be manager of the new branch. The headquarters will be with the Van Vliet-Fletcher company, which now holds the Studebaker agency.

**Boston, Mass.**—The Lozier company is seeking a location for a new home in the Hub, and one of the sites that seemed to meet the approval of the company officials is on Ipswich street. This is not far from Massachusetts avenue and Boylston street, where the greater number of the agencies are now housed. The matter will be settled shortly.

**Boston, Mass.**—C. J. Fisher, who represents the Gramm in New England, has succeeded in placing sub-agencies in various sections so that the truck is now represented in Worcester by H. F. Littlefield, Brockton by the Gay Auto Co., Salem by J. S. Nelson & Co., Dover, N. H., by the Granite state garage, and Meriden, Conn., by W. B. Johnson.

**Montreal**—The garage built by the Colonial Real Estate Co. has a frontage of 160 feet and a width of 90 feet, with a balcony for the chauffeurs. The place will accommodate 150 cars. The site chosen is at the corner of Hillside and Metcalf avenues. The garage will be two stories in height and will be reinforced concrete. The cost is estimated at \$120,000.

**Indianapolis, Ind.**—The Fisher Automobile Co. and the Gibson Automobile Co., of Indianapolis, will be merged under the name of the former on September 1. Cecil E. Gibson, now treasurer and manager of the Gibson company, will become general manager of the Fisher company. The Pennsylvania street location of the Gibson company will be given up, while the Massachusetts avenue location will be used as a branch for accessories and sundries. All motor car agencies will be conducted from the Fisher building, Capitol avenue boulevard and Vermont street, and it is likely two more stories will be added to the three-





story building. The Fisher company has the agency for the Overland, Alco, Stoddard-Dayton, Empire and Baker, while the Gibson company handles the Franklin, Krit, Everitt and Brush.

**Lima, O.**—Henry Mack, proprietor of the Mack garage on West Market street, will start the erection of a large garage and salesroom on the public square, which will enlarge his establishment three-fold.

**Louisville, Ky.**—The new garage of the Borgerding Motor Car Co., on East Spring, between Fourth and Fifth streets, is so nearly completed that the company was able to move into its new quarters.

**Toledo, O.**—The Northern Ohio Motor Car Co., of Toledo, has closed a deal with the United States Motor Co., under which it will have the exclusive sale of Brush runabouts in northwestern Ohio for 1912. The concern has handled this car for the past year.

**Boston, Mass.**—J. W. Maguire, agent for the Pierce-Arrow, expects to sign papers shortly for a new garage for his cars. Since the Pierce-Arrow company put a truck on the market and Mr. Maguire has sold a number of them, he has found that his repair department is inadequate to handle the increasing business, so he has about decided to have a building erected purposely for his business.

**Columbus, O.**—The Ohio Auto Accessory Co., incorporated with a capital of \$30,000 to manufacture patented release gauges and valves for tires, has been organized by the election of E. J. Harth, Cincinnati, president; Nathan Meyer, Columbus, vice-president; William Bott, treasurer; A. E. Shetford, secretary, and W. C. Wentworth, general manager. The office and factory of the company are located on North High street.

**Des Moines, Ia.**—Three thousands tires per month will be the capacity of the new Iowa Automobile Tire Filler Co., whose organization in Des Moines was announced some time ago. The Des Moines plant will be located at 307-309-311 East First street. J. J. Tompkins is now manager of the Swinehart branch in Philadelphia, and G. E. Grimes has become a member of the Philadelphia sales force. The Swinehart has just established an agency in Seattle, Wash., with the Morgan Supply Co.

**Boston, Mass.**—The Decatur Motor Truck Co. has taken over the business of the Taylor Motor Sales Co. in Boston, the latter firm having been handling the Decatur since last January. The salesrooms on Massachusetts avenue have been given up and headquarters have been established in Cambridge. Later on, when the ball park is finished in the back bay for John I. Taylor, owner of the Boston Americans and president of the Taylor Motor Sales

**Terre Haute, Ind.**—Railway and Auto Grease Cup Co., capital stock \$75,000; to manufacture and sell automatic dustproof grease cups.

**Vincennes, Ind.**—Carlyle Oil Co., capital stock \$10,000; to operate oil wells and to sell products therefrom.

**Columbus, O.**—Mather Spring Co., capital stock \$100,000; to manufacture springs and accessories; incorporators Gordon M. Mather, Robert C. M. Kerghan, Rathburn Fuller, Charles G. Cunningham and Richard D. Logan.

**Cleveland, O.**—Paisch Auto Livery Co., capital stock \$1,000; to conduct garage and taxicab business; incorporators J. A. Burke, Charles A. Aaron, William B. Byrnes, R. M. Schrad and Charles A. Burke.

**Cleveland, O.**—A. E. Davis Motor Co., capital stock \$10,000; to operate a garage and sales agency.

**Boston, Mass.**—Motor Car Co., capital stock \$25,000; to manufacture and deal in motor cars; president, W. H. Vinal; treasurer, S. S. Anderson.

**New York**—Gardner Matthews Automobile Mfg. Co., capital stock \$100,000; to manufacture motors, motor vehicles, etc.; incorporators, Robert E. Matthews, Jacob W. Pascon and Mary D. Schneer.

**Augusta, Me.**—Bernston Spring Wheel Co., capital stock \$2,000,000; to manufacture wheels; president and treasurer, E. M. Leavitt.

**Camden, N. J.**—City Electric Omnibus Co., capital stock \$500,000; to manufacture electric buses; incorporators, T. R. Hansell, John A. MacPeak and I. C. Clou.

**Wilmington, Del.**—Belt Cushion Tire Co., capital stock \$1,800,000.

**Wilmington, Del.**—United Garage Co., capital stock \$100,000.

**Augusta, Me.**—Owners' Garage Co., capital stock \$500,000; incorporators Reginald A. Fessenden and Alexander P. Browne.

**New York**—Bijou Motor Lighting Co., capital stock \$375,000; to manufacture electrical apparatus; incorporators, G. H. Englehart, M. I. Dempsey and C. E. Mann.

Co., and who is now an officer of the Decatur company, salesrooms will be opened there and the garage also transferred to the property.

**Superior, Wis.**—The Carey garage has been opened at Superior by T. L. Casey at 1705-1709 Tower avenue.

**San Francisco, Cal.**—W. H. Thompson, manager of the Standard Motor Car Co., San Francisco, has closed an agency for the Kelly truck in San Francisco.

**Columbus, O.**—The Hearn Tire and Rubber Co. has opened a store at the corner of Fourth and Gay streets, for the handling of tires and accessories.

**Marinette, Wis.**—The new garage of the Twin City Auto and Tire Co. of Marinette, Wis., and Menominee, Mich., will be ready for occupancy before July 1.

**Washington, D. C.**—The Buick Motor Co. has awarded contracts for the expenditure of \$5,000 on improvements in its salesrooms at 1022 Connecticut avenue.

**Seattle, Wash.**—The Winton Motor Carriage Co. is spending in the neighborhood of \$2,000 on its northwest branch. Every inch of the spacious walls of the display room have been covered with French plate glass mirrors that stand 8 feet high. Expensive carpets and a Turkish rug will be placed on the floor to give the display of

**New York**—Auto Trucking Co., capital stock \$10,000; to deal in and rent motor cars; incorporators, Samuel Simons, Henry Frohwitter and Samuel Steiner.

**Cincinnati, O.**—Motor Transfer Co., capital stock \$10,000; to conduct general storage, livery and transfer business; incorporators, Charles N. Slater, H. B. Douglas, Edwin Flory, L. C. Herrick and C. B. Stout.

**Cincinnati, O.**—Iowa Auto Tire Filler Co., capital stock \$100,000; to fill tires; incorporators, Thomas W. McNear, Jr., W. C. Nelson, E. Warren Doolittle and William A. Graham.

**Birmingham, Ala.**—Highland Garage Co., capital stock \$5,000; maintain garage; incorporators, H. J. Hooper and G. G. Sharpe.

**Indianapolis, Ind.**—Merchants' Electric Auto Co., capital stock \$50,000; to deal in motor cars; directors, H. B. Stout, Medalline L. Darrow, J. E. Spiegel, C. P. Tighe and H. B. Stout, Jr.

**Indianapolis, Ind.**—Ideal Motor Car Co., capital stock \$100,000.

**Boston, Mass.**—Collier Automobile Goggle Co., capital stock \$100,000; incorporators, Guy B. Collier, William E. Furniss and Thomas R. Nevins.

**New York**—Front Drive Motor Co., capital stock \$50,000; to manufacture motor trucks, engines, electrical appliances, etc.; incorporators, W. Christie, F. J. Alder and W. A. Fleming.

**New York**—Auto Lighting Exchange Co., capital stock \$100,000; to manufacture and deal in storage batteries and lighting supplies; incorporators W. N. Helm, A. F. Johnson and T. F. Axtell.

**New York**—Holmes Motor Co., Inc.; capital stock \$500,000; to manufacture, repair and deal in engines; president, L. B. Swett; treasurer, G. E. Burnham.

**Philadelphia, Pa.**—Oldsmobile Co. of Pennsylvania; capital stock \$10,000; to manufacture and deal in motors, motor vehicles, supplies, etc.; incorporators, Benjamin Soims, Samuel W. Sibley, William Linton, F. G. Seitz and Harry A. Mackey.

Winton cars a richer setting. Suspended from the balcony of the room will be hanging baskets of ferns and flowers.

**San Francisco, Cal.**—C. L. Hewes has been appointed sales manager of the Pacific Motor Car Co., of San Francisco.

**Montreal**—The Ramsay Motor Co., 748 St. Paul street, is representing the Schacht and has in addition opened a garage and repair shop.

**Columbus, O.**—The Radio Mfg. Co., recently organized to manufacture radiators, has located at 274 North Third street, in a large factory building.

**Montreal**—Several local capitalists have decided to form a company in Chatham, Ontario, with \$20,000 stock, to manufacture motor trucks.

**Titusville, Pa.**—George B. Smith has established a garage and machine plant on East Central avenue and will have one or more agencies for next year.

**Chicago, Ill.**—The Federal Motor Car Co. has taken over the Chicago business of the Herreshoff Automobile Co. The company is at 2337 Michigan avenue.

**Milwaukee, Wis.**—The Smith-Hoppe Co. has been organized by J. A. Smith and Adolph C. Hoppe, formerly with the Milwaukee branch of the Buick Motor Co., and will handle the Oldsmobile and Hupp-Yeats electric lines. The company will open for business at once and occupy temporary quarters until its new garage on Wisconsin street is completed.





# Legal Lights and Side Lights

## DETROIT'S REIGN OF TERROR

**D**ETROIT motorists are just now undergoing a veritable reign of terror, due to the strict enforcement of the new traffic ordinance. The limitation of speed outside the mile circle to 15 miles an hour, the provision making it necessary to keep 6 feet or more from a standing street car and the prohibition against passing street cars to the left, form the ground for most of the complaints, and the judges of the recorders' court have been assessing fines at a rate which surpasses anything in local history. Two sessions of the court resulted in the collection of more than \$2,000 in fines, while there are almost daily instances of heavy penalties.

The court room has been packed almost to suffocation each Monday and Tuesday with motorists who have failed to accustom themselves to the rigid restrictions. As a rule, the penalty for infraction of the speed limit can be determined in advance. The precedent has been set of \$5 for every mile above 15. The complaints are made by motor cycle officers who give their speedometer readings. In cases where high speed is maintained for prolonged distances, the fines are even heavier. Fines of \$100 have been by no means unusual.

The judges insist that second offenders will be very likely to draw jail sentences. One plucky motorist is now serving a 10-day sentence, which he took in preference to a \$25 fine, for driving his car at the rate of 23 miles an hour, over three blocks on one of the main streets late in the evening.

Unusual sights are observed on all the main avenues of the city, along which roll cars at a pace which reminds one of a funeral procession. Although the motorists are indignant at the unnecessary hardship imposed on them, they believe that strict enforcement will do more to demonstrate the undue severity of the measure than could be accomplished by any other possible means. Just how long the present reign of terror will continue is, however, a matter on which nobody cares to express an opinion.

## DODGING NEW YORK LAW

Canadian motorists who propose touring the United States and more particularly New York state, have devised a plan whereby they may fool the New York state authorities. It was discovered only recently when a large number of Michigan license tags were seen in Niagara Falls, Ont., hung from the front and rear of the cars by the side of the Ontario license tag.

During the past few weeks the provincial authorities have been exceedingly active in arresting New York state tourists who

entered the New York territory without first obtaining the provincial license, which costs \$4. In retaliating, the authorities in Niagara Falls have arrested Canadian tourists who entered the country without first procuring a New York state license, which costs anywhere from \$5 to \$50, according to the horsepower of the car. Canadian motorists, however, learned that Michigan state licenses are good in New York state, and that they cost but \$3, and now they are all securing Michigan numbers and are being passed when they enter the country at either of the bridges.

The authorities can do nothing, for under the Callan law the license of any state recognizing the New York state license is good in New York, and the Michigan licenses are good here because New York licenses are good in Michigan. Magistrate Fraser, of the Canadian side, stated recently that he was sure that the provincial authorities would not accede to the request that the New York state licenses be recognized in this province. He has discussed the matter with the authorities at Toronto.

## DEFECT IN TEXAS LAW

The 15,000 owners of Texas may not be conscious of the fact that every time they take their cars out in broad daylight they are violating a state law and the penal code. They may not believe it is necessary to start at least one lamp aglow while the sun is shining, but unless they do so they are tempting arrest and prosecution in the eyes of the law.

This motor law of Texas is much like laws of many other states in which errors creep in and make the whole ridiculous. According to the Texas law, motor vehicles are exempt from burning a light only 2 hours out of each 24. The exempted time is 1 hour before and 1 hour after sunrise. The law is plain. It is as follows:

Art 1013 ss (ID., Sec. 6)—Bell, etc., and Lamp—Every driver or operator of a motor car or motor vehicle shall have attached thereto a suitable bell or other appliance for giving notice of its approach, so that when such attachment is rung or otherwise operated it may be heard a distance of 300 feet and shall carry a lighted lamp between 1 hour after and 1 hour before sunrise.

Such is the law. The rule of reason may be applied when interpreting the final line so as to make the law read "between 1 hour after sunset and 1 hour before sunrise," yet the lawmaker, the legislature, the engrossing clerk or the printer may have dropped or forgotten the sunset end of it—at least it is a law without a sunset. The law might pass muster in corporation and lower courts, but in an appeal court where a technicality oft times sways a destiny it undoubtedly would run afoul a test of constitutionality.

The city of Houston has a traffic

ordinance wherein the defect is remedied and where sunset appears. This ordinance is correct, yet it is generally understood the laws of a municipality can not contravene those of the commonwealth. Yet the law and the ordinance are at variance. The law abiding motorist, to keep within both laws, must maintain a light burning on his car 22 out of 24 hours or keep his car in the garage. In Houston the ordinance is well observed, yet the state law is daily transgressed. Few, perhaps, are conversant with the defect. Yet it is not probable that their offense will ever officially be called to their notice to hold them to account for the violation of one of the laws of the state of Texas.

## LIVERY STABLE KEEPER OR WHAT?

"Is the proprietor of a garage a livery stable keeper in the sight of the law?" This is the question with which Judge Osborn of Columbus, Ohio, is wrestling in the case of John Hart, tried on the charge of defrauding a liveryman. Recently Hart and three companions rented a taxicab from the Columbus Taxicab Service Co. and kept the machine for 16 hours, running up a bill of \$40, which they refused to pay. Upon Hart's arrest his attorney set up the objection that the law contemplated livery stable proprietors only and it could not be applied in the Hart case. Could the contention of the defense be upheld, proprietors of taxicab and motor livery companies in Ohio will be without the proper protection.

## TAXICABS NOT INCLUDED

That the police have no power to arrest a man for refusing to pay his taxicab bill was the judgment rendered in Montreal by Judge Lanctot when Thomas Davis was arraigned on a charge of being drunk and refusing to pay for a taxicab. Judge Lanctot explained that while the man was compelled to pay for cab hire as a consequence of a civic bylaw, there was nothing in either the city bylaws or the criminal code referring to taxicabs, and as a consequence allowed Davis his liberty, although recommending that he settle for the taxicab at once.

## MONTREAL AFTER CHANGES

Montreal's board of control has decided to ask the legislative committee of the city council to make some drastic changes in regard to motor car rules when it meets to consider new charter amendments. Three important suggestions are made by the controllers. They are as follows: That motor cars shall be permitted to wait in streets for a fixed time. That motor cars shall be forbidden the use of sirens. That cars are forbidden to leave behind them a cloud of obnoxious smoke.